This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

Digitized by Google

Harry

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

PROCEEDINGS

OF THE

ZOOLOGICAL SOCIETY

OF LONDON.

PART XII.

1844.

PRINTED FOR THE SOCIETY,

BY R. AND J. E. TAYLOR, RED LION COURT, FLEET STREET.

Digitized by Google

LELAND STANFORD JUNIOR
LIBRARY
UNIVERSITY.
A24542

Digitized by Google

LIST

OF

CONTRIBUTORS,

With References to the several Articles contributed by each.

ALEXANDER, THOMAS, Esq. *page*
Presentation of nineteen specimens of Stuffed Birds from Van Diemen's Land 64

BALL, R., Esq.
On the *Bradypus didactylus* 93

BALL, R., Esq.
On *Felis Melanura* 128

CADELL, —, Esq.
Donation of Skin of *Bradypus tridactylus* 167

DERBY, Right Hon. the Earl of.
Extract of a Letter from 123
Letter from, on the Parturition of *Bettongia* 163

DICKSON, E. D., Esq., and ROSS, H. J., Esq.
Letter from, accompanied by a donation of Birds' Skins . 64

DICKSON, E. D., Esq.
Letter from 153

DODD, GEORGE, Esq., M.P.
Exhibition of a fine specimen of the Wiry-haired Wolf or Deer-hound 122

ELLIOTT, WALTER, Esq.
Letter from, accompanied by a number of Skins of Animals from the Neilgherry Hills and the Carnatic 81

FALCONER, Dr., and Capt. CAUTLEY.
Communication on the *Colossochelys Atlas* 54
Conclusion of paper on the *Colossochelys Atlas* 84

Digitized by Google

FAYRER, Capt., R.N. page
Letter from, accompanied by two specimens of *Strix Nyctea* 19

FORRESTER, JOSEPH JAMES, Esq.
Letter from, with donation of specimens of Insects, Echini, &c. 164
Letter from 167

FRASER, Mr. L.
Description of three New Species of Birds 37
Exhibition of Birds' Skins presented by E. D. Dickson, Esq., H. J. Ross, Esq., and by Capt. Thomas Graves, R.N. . 64
Description of *Lophyrus Victoria* 136
On Birds from Chile, and description of *Leptopus Mitchellii* 157

GILBERT, Mr.
Letter from, describing the habits of some Mammalia and Aves of Western Australia 33

GOULD, JOHN, Esq.
Description of *Atrichia clamosa* 1
On New Species of Western Australian Birds 5
Descriptions of three New Species of *Halmaturus* and *Lagorchestes* 31
Exhibition of a series of Birds from Australia, collected by Mr. Gilbert and himself 55
Exhibition and character of a number of Animals, &c. transmitted from Australia by Mr. Gilbert 103
Description of *Podiceps Australis* 135

GULLIVER, GEORGE, Esq., F.R.S.
Additional Measurements of Blood-Corpuscles of Mammalia and Aves, &c. 7
On the Blood-Corpuscles of the *Bradypus didactylus*, &c. 95
Additional Measurements of the Blood-corpuscles of Mammalia and Aves 145

HANLEY, SYLVANUS, Esq.
Descriptions of New Species of *Mytilacea*, *Amphidesma*, and *Odostomia* 14
Descriptions of New Species of *Tellina*, collected by H. Cuming, Esq. 59
Continued 68, 140, 146, 164
Descriptions of New Species of *Cytherea* 109
Descriptions of New Species of *Cyrena*, *Venus*, and *Amphidesma* 159

HARRIS, Major.
Communication on the Natural History and Zoology of Abyssinia 3

Digitized by Google

HERON, Sir ROBERT. page
Letters on the *Jerboas* which have produced young in his collection 123

HILL, RICHARD, Esq.
Letter, accompanied by a donation of Birds' Skins from Jamaica 1

HINDS, RICHARD BRINSLEY, Esq., R.N.
Descriptions of New Species of *Triton*, *Solarium*, and *Corbula* 21
Descriptions of *Marginellæ* collected during the voyage of H.M.S. Sulphur, and by H. Cuming, Esq. 72
Descriptions of New Species of *Ringicula* and *Neæra*, from the cabinets of Sir E. Belcher and Hugh Cuming, Esq. 96
Description of a new *Solarium* 158

LOWE, Rev. R. T.
Letter from, with specimens of Fish from Jamaica . . . 95

PERCY, Professor.
On the Management of various Species of Monkeys in confinement 81

PRICHARD, —, Esq.
On the *Crania* of the Laplanders and Finlanders . . . 129

REEVE, LOVELL, Esq.
Descriptions of seven New Species of *Glauconome* . . . 19
Descriptions of thirty-three New Species of *Arca* . . . 39
Monograph of the genus *Myadora* 91
Descriptions of New Species of *Triton*, collected chiefly by Hugh Cuming, Esq. 110
Descriptions of New Species of *Arca*, from the cabinet of Hugh Cuming, Esq. 123
Descriptions of New Species of *Ranella* 136
Descriptions of New Species of *Mitra* and *Cardium* . . 167

SOWERBY, G. B., Jun., Esq.
Descriptions of New Species of *Scalaria* collected by Hugh Cuming, Esq. 10
Continuation of descriptions of *Scalaria* 26

SOWERBY, G. B., Esq.
Descriptions of New Species of *Columbella*, from the collection of Hugh Cuming, Esq. 48
Descriptions of six New Species of *Voluta* 149

STRICKLAND, H. E., Esq., M.A.
On the evidence of the former existence of Struthious Birds distinct from the Dodo, in the Islands near the Mauritius 77
Descriptions of New Species of Birds brought from Western Africa by Mr. L. Fraser 99

Digitized by Google

TEMPLETON, Dr., Roy. Art. *page*
Communication, accompanied with drawings of *Semnopithecus Leucoprymnus Nestor*, Benn. 1
On some Varieties of the Monkeys of Ceylon, *Cercopithecus pileatus* and *Loris gracilis* 3
Description of *Megascolex cæruleus* 89

WATERHOUSE, Mr.
On various Skins of Mammalia from Chile, with notes relating to them by Mr. Thomas Bridges 153

WEAVER, Mr.
Exhibition and donation of Rare Insects 163

WHITE, ANTHONY, Esq.
Letter from, on the Dissection of *Felis Leo* 54

WILLSHIRE, WILLIAM, Esq.
Letter, accompanying a donation of an Aoudad, *Ovis Tragelaphus* 95

YARRELL, WILLIAM, Esq.
Exhibition of three specimens of *Rana esculenta*, from Foulmire, Cambridgeshire, presented to the Society by F. Bond, Esq. 109

Digitized by Google

PROCEEDINGS

OF THE

ZOOLOGICAL SOCIETY OF LONDON.

January 9, 1844.

Rev. John Barlow, M.A., F.R.S., Sec. R.I., in the Chair.

A letter was read from Richard Hill, Esq., Spanish Town, Jamaica (Corr. Memb.), accompanied by two Birds' Skins, which he presented to the Society, one of which Mr. Gould pronounced to be the European Shoveller, *Rhynchaspis*, in a peculiar state of plumage, which it only assumes for about two months in the year; the other was the *Fringilla Canariensis*.

A communication was read from Dr. Templeton, Royal Artillery, Colombo, Ceylon, Corr. Mem., accompanied by drawings of a species of Monkey which he conceived to be new. Mr. Waterhouse recognized it as the *Semnopithecus Leucoprymnus Cephalopterus*, described already by Mr. Bennet in the 'Proceedings of the Zoological Society' as *Semnopithecus Nestor*.

At the request of the Chairman, Mr. Gould called the attention of the Meeting to a new species of Bird from Western Australia, the habits of which he described thus:—The bird is an inhabitant of the close underwood of the country, never making its appearance in the open plains or woods, thus rendering it a matter of difficulty to procure a specimen; the only means of securing it being to lie concealed in the thicket until it hops in sight, within two or three yards of the observer.

The great peculiarity which distinguishes it from all others of the *Sylviadæ*, and marks it at once as a new genus and species, is the total absence of the vibrissæ or bristles at the base of the mandibles. From this fact, and its note being the loudest of all the inhabitants of the grove, Mr. Gould proposed the name of *Atrichia clamosa*.

Genus Atrichia.

Gen. Char.—*Rictus* omninò vibrissis carens. *Rostrum* æquè longum atque caput, ad latera compressum, mandibulæ superioris apice distinctè denticulato, gonyde a rictu acclivi exinde rostri lineam

Digitized by Google

sequente; culmine altè in frontem ascendente; naribus permagnis operculo tectis, et sulco, ad basim mandibulæ superioris, positis. *Alæ* breves, rotundatæ, concavæ, primariis primis tribus gradatis, quartâ, quintâ, sextâ et septimâ inter se ferè æqualibus. *Cauda* longiuscula, rotundata, rachibus rigidis, pogoniis laxis, decompositis. *Tarsi* sic et *pedes* robusti, halluce cum ungue valido; digitis externis ferè coæqualibus.

ATRICHIA CLAMOSA. *Atr. corpore superiore, alis, cauddque fuscis; singulis plumis, lunulis obscurè nigrescentibus, transversim notatis: remigum primorum pogoniis internis saturatè fuscis; caudâ guttatâ, non fasciatâ; guld pectoreque rufescenti-albis, notâ magnâ ad gulæ partem inferiorem; abdomine crissoque rufis.*

All the upper surface, wings and tail brown, each feather crossed by several obscure crescent-shaped bars of dark brown; the inner webs of the primaries very dark brown, without markings, and the tail freckled instead of barred; throat and chest reddish white, with a large irregular patch of black on the lower part of the throat; flanks brown; abdomen and under tail-coverts rufous; bill horn-colour; irides dark brown; feet dark brown.

Total length, $7\frac{3}{4}$ inches; bill, $\frac{7}{8}$; wing, 3; tail, 4; tarsi, 1.

Hab. Western Australia.

Digitized by Google

January 23, 1844.

William Horton Lloyd, Esq., in the Chair.

A communication was read from Major Harris, lately on an embassy to Shoa, in Southern Abyssinia, containing his observations on the natural history and zoology of that country, accompanied with an extended list of its Mammalia, Aves, Reptilia, &c., with their native names.

Dr. Templeton's memoir on some varieties of the Monkeys of Ceylon was then read:—

"The *Cercopithecus pileatus* ('Menageries,' *M. sinicus*, F. Cuv.) is the common small monkey of every part of the western and southern maritime provinces of Ceylon. It is readily distinguished from the Toque by the light tan hue of the face and the black margin of the lower lip. The male is more robust and not so playful as the female; both are easily tamed, and retain their gentleness and familiarity in old age. The figure in the 'Histoire des Mammifères' represents the animal much too stout, the tail rather short, the distinction of colour of the back and abdomen marked by a too well-defined line, and the hairs on the crown of the head not sufficiently copious, long or divergent. In other respects the figure is good. In that excellent little work the 'Menageries,' page 308, are these words: 'with the long hair of the head standing erect, like an upright crest.' This, applied to our animal, I have difficulty in comprehending; the hair on the head of the adult males and females being flattened down, strikingly divergent from a small central part, and in some instances slightly separated down the middle; but anything like an upright crest I have never yet seen. There are some slight distinctions of sex and age which it may be proper to note, remarking at the same time that the peculiarities, though obvious enough in the majority, are by no means constant, but shade into each other, especially in the domesticated animals. The adult male, as I have above remarked, has the hair of the crown flattened down, equally divergent in all directions, of the same colour and appearance as that of the back; that is, rather long, mouse-coloured close to the skin, yellowish brown, or in strong sunlight golden with a shade of chestnut, at the tips. The face is light tan-coloured, with scattered black hairs: along the eyebrows a few stiff black hairs projecting straightforwards, and above these, and beneath the crowning tuft, a dark band of hair; the space about the ears whitish, ears fuliginous; lower lip with a broad black margin; conjunctiva black. Iris reddish brown, pupil black. Anterior surface of the trunk and inner side of the limbs pale. The hands are strong, fuliginous; the dorsum thinly

Digitized by Google

covered with hairs, like those of the back. Tail thickish at the root, mouse-coloured, not diminishing to a point; apex light brown or grey; callosities tan-coloured, with the hair for about an inch surrounding them fuliginous; penis trilobed. The female has the legs and arms of a redder tint, the inside of the upper arms and broad patches of the chest and belly indigo-blue, and the band across the forehead not usually dark, but of an orange-yellow. In the immature the hair of the crown is not much flattened down or so diverging, the face more old-fashioned and exquisitely comical, the tail nearly naked, and the cheeks, palms, soles and callosities, pale pinkish. I have nothing to add to the admirable description of the habits of the genus given in 'Menageries.' This and the Toque should unquestionably be separated from all other 'Macaques.'

"The *Loris gracilis* is very common in the lower country of the south and east of Ceylon. Mr. Baird's account leaves little to be said about it, as its timorousness and nocturnal habits afford little opportunity for watching it. I have had them several times, but have never been able to keep them for more than a few months; they soon begin to pine away and die. Their food consisted of very ripe plantains, rice, and such insects as abounded in the apartment. The last I had slept nearly all day with the nose resting against the lower part of the belly, as represented in the sketch; about dusk, if the room was perfectly quiet, it ventured about, crawling along the rails of the chairs with a very gentle movement, occupying nearly one-third of a minute in closing its hands on the parts of the furniture it grasped in succession, and moving its head from side to side with much grave deliberation; but when a spider or other insect came within its reach, its clutch at it was quick as lightning, and with equal rapidity it was conveyed to the mouth, so that I could only guess at what it had seized from knowing that insects abounded in the room. It was perfectly conscious of being watched, as I have occasionally detected it moving with considerable rapidity, but instantly assuming its ordinary slow movement when my eyes were directed towards it. It would not tolerate the familiarities which are mentioned by Mr. Baird; and Capt. Geale, 90th Light Infantry, remarked to me that it seemed particularly anxious to avoid having its hinder extremities touched, which is certainly the case. I never saw it search for 'Pediculi' among its hair, nor could ever detect any on its body after death. When approached it retired along the stick placed slantingly in the corner for its use, or along the back of the chairs with the usual deliberate movement, its great goggle eyes fixed immoveably on your face, or hands if held towards it, and with every expression of extreme fear. Its mouth appears so small and so little distensible, at least when alive, that I cannot imagine it capable of biting anything except it be of very small size; yet the natives universally assert that it destroys peacocks in the jungle, seizing them by the neck, which it clutches with such tenacity that the bird soon falls exhausted to the ground off its perch, or in its sudden flight attempting to escape its persecutor; and further, that having devoured the brains it leaves the rest of the body untouched. The

Digitized by Google

sketch* is a good one, taken from life; but it must be remarked that the white streak between the eyes often extends a little backwards, gradually disappearing about the level of the ears. The hair is very singular when the animal is alive; it resembles very soft close-packed wool, somewhat curled and arranged in little tufts, as the hair on the scalp of the negro, but extremely delicate; it soon loses this appearance after death if much handled, as is always the case in removing the skin.

"There are *no other species* of *Stenopidæ* in Ceylon."

Mr. Mitchell, on the part of Mr. Gould, communicated to the Society a new species of *Psophodes*, which he described as *Psophodes nigrogularis*.

Also an additional example of the genus *Amadina*, perhaps the loveliest of the tribe yet discovered, remarkable for the great beauty and singularity of the hues with which it is adorned, the breast being crossed by a broad band of lilac, a colour so rarely found in birds, that he does not recollect any example of the same tint. Mr. Gould has hitherto seldom adopted the practice of many naturalists, of naming new species from individuals connected with science; in this instance he has been induced to depart from his usual course, in order to pay a tribute of respect to the memory of the late Mrs. Gould, who assisted him so zealously and with such talent in his ornithological pursuits. For this bird, of most graceful form and delicate colour, he proposes the name of *Amadina Gouldiæ*.

Psophodes nigrogularis. *Psoph. corpore superiore olivaceo; inferiore cinereo apud latera fuscescente, abdomine medio albo; caudâ pallidè olivaceo-fuscâ, rectricibus quatuor externis apicem versus nigro vittatis, apicibus albis; guld nigerrimâ, strigâ albâ ab angulo mandibulæ inferioris tendente modò nigro inclusâ.*

Plumage of the upper surface olive; under surface ashy, passing into brown on the flanks and white on the centre of the abdomen; primaries brown; tail light olive-brown, the four lateral feathers crossed near the extremity with a band of black, and tipped with white; throat deep black, with a stripe of white from the angle of the lower mandible, just within the black; bill dark horn-colour; irides dark brown; feet dark horn-colour.

Total length, $6\frac{1}{4}$ inches; bill, $\frac{7}{8}$; wing, $3\frac{1}{8}$; tail, $4\frac{1}{2}$; tarsi, $1\frac{1}{8}$.

Hab. Western Australia.

This bird has all the characters of the *Psophodes crepitans* in the short and concave form of its wings and the rounded form of the tail, but differs in the absence or very slight development of the crest.

Amadina Gouldiæ. *Am. fronte, loris plumis auricularibus, et guld splendidè nigris; notâ ab oculis circum occiput et per latera colli tendente, ex ærugine viridi, gradatim cum flavido-viridi corporis superioris se commiscente; fasciâ per pectus latâ, lucidè lilacino-purpured; corpore inferiore cerino.*

* The published figures give no idea of the animal; they all represent the snout much too long, the eyes too small, and the face not sufficiently broad and flat.

Digitized by Google

Male.—Forehead, lores, ear-coverts and throat deep velvety-black; from behind the eye, round the occiput, and down the sides of the neck, a mark of verdigris-green, gradually blending into the yellowish green of the upper surface and wings; across the breast a broad band of shining lilac-purple, below which all the under surface is shining wax-yellow; bill flesh-white at the base, tipped with blood-red at the point; feet fleshy.

Young Female.—Head grey; upper surface light olive; under surface pale buff; chin white; primaries and tail brown; irides dark brown.

Total length, $3\frac{3}{4}$ inches; bill, $\frac{3}{8}$; wing, $2\frac{1}{2}$; tail, $1\frac{1}{4}$; tarsi, $\frac{5}{8}$.

Hab. North-eastern portion of Australia.

Remarks.—The young of this species killed by Mr. Gilbert had the gape on each side ornamented with three excrescences about the size of the head of a moderate-sized pin, the upper and lower of which were of a bright indigo-blue, and the middle one of a very pale yellow, and on the roof of the mouth five small spots of purple, forming a crescent across to each angle of the gape.

Digitized by Google

February 13, 1844.

George Gulliver, Esq., in the Chair.

"Additional Measurements of Blood-corpuscles or Red Particles of Mammalia and Birds," by George Gulliver, Esq., F.R.S., No. 2*.

The measurements are expressed in vulgar fractions of an English inch, according to the practice which I have always adopted. As the numerator is invariably 1, it is omitted throughout, the denominators only being printed.

In each instance the measurements of the common-sized discs are first set down; a space is then left; the small- and large-sized discs are next noted; and lastly, the average deduced from the preceding numbers is placed beneath the line. Of the oval blood-discs, the long diameter is denoted by the letters L.D., and the short diameter by S.D. The blood was taken from adult living animals, unless stated to the contrary.

MAMMALIA.

Feræ.

Tricoloured Fox (*Canis cinereo-argenteus*, Schreb.).

3555
4000

5333
2900

3761

Blood from a prick of the tail.

Indian Fox (*Canis Bengalensis*, Shaw).

Same as the preceding.

Indian Tiger-cat (*Felis Bengalensis*, Desm.).

4600
4570

6400
3200

4419

Blood from a prick of the upper lip.

Ruminantia.

Stanley Musk Deer (*Moschus Stanleyanus*, Gray).

Measurements detailed in the Proceedings of the Zoological Society, May 9, 1843, page 66. I have since made another observation, which agrees with the former one in showing that the blood-discs of this animal resemble in minuteness those of the Napu Musk Deer.

Virginian Deer (*Cervus Virginianus*, Ray).

5450
5333
5000

7110
3555

5036

Blood from a prick of the lip.

* No. 1 will be found in the Proceedings of the Zoological Society, No. CXIX., Dec. 13, 1842, page 190.

Digitized by Google

Male Ibex (*Capra Caucasica*, Guld).

6858
7110
10666
5333

7045

The average is almost exactly the same as in my first measurements of the blood-discs of this animal.

Blood from a prick of the ear.

Female Cashmere Goat (*Capra Hircus*, var.).

6400
6665
8000
5333

6466

The average is very nearly the same as in my first measurement of the blood-discs of this animal. See Appendix to Gerber's Anatomy, p. 46.

Blood from a prick of the ear.

Female Kid, twelve days old, bred between the Ibex and Goat just mentioned.

8000
7275
6000
5333
4500
10666
4000

5918

Blood from a prick of the ear.

The preceding measurements confirm my former observations, published in the Proceedings of the Zoological Society, Aug. 9, 1842, p. 107,—that the blood-discs of the Ibex are slightly smaller than those of the Goat.

The Kid between these animals appears to have generally larger and more variously-sized blood-discs than either of the parents.

The observations were favourably made for comparison, because the blood of the three animals was taken and examined from the same part, on the same day and hour, and under the same circumstances.

RODENTIA.

Hackee Squirrel (*Sciurus Listeri*, Ray).

4000
3800
5333
3200

3948

Blood from a vein of the ear.

Quebec Marmot (*Arctomys Empetra*, Schreb.).

3600
3330
4570
2900

3503

Blood from a prick of the lip.

Harvest Mouse (*Mus messorius*, Shaw).

4000
4570
6400
3200

4268

Thus this little animal, the smallest of the British Mammalia, has blood-corpuscles larger than those of the horse, as may be seen by comparing the measurements now given with those of the blood-corpuscles of the horse, published in my Appendix to Gerber's Anatomy, p. 43; and a reference to the dimensions of the blood-cor-

Digitized by Google

puscles of numerous Rodentia detailed in the same work, p. 47–50, will show that the corpuscles of the Harvest Mouse are rather smaller than those of any animal yet examined of this order.

The blood of the Harvest Mouse was obtained from the heart, in one case about twelve, and in another twenty-six hours after death, in cool weather.

For opportunities of examining these animals, I am indebted to the kindness of Mr. Griffith and Mr. Prince.

Canada Porcupine (*Erethizon dorsatum*, F. Cuv.).

3555
3428
3200
4572
2666

3380

Blood from a prick of the skin of the nose.

Beaver (*Castor Fiber*, Linn.).

3555
3303
3200
3000
5000
2666

3325

Blood from a prick of the nose of a female about half-grown.

MARSUPIATA.

Kangaroo Rat (*Hypsiprymnus setosus*, Ogilby).

4000
5333
3200

4000

Blood from a prick of the tail.

The corpuscles are slightly smaller than those of many other animals of the same order, and resemble in size the corpuscles of the Viverrine and Mauge's Dasyure. See my measurements of the blood of discs of Marsupiata, Dublin Medical Press, Nov. 27, 1840; London and Edin. Phil. Magazine, Dec. 1st, 1840; and Proc. Zool. Soc., June 8, 1841, p. 49.

AVES.

OMNIVORÆ.

Blue Jay (*Garrulus cristatus*, Vieill.).

L.D.	S.D.
2000	3200
2900	4800
1600	3000
2041	3512

Blood from a vein of the pinion.

INSECTIVORÆ.

Rufous Mocking-bird (*Orpheus rufus*).

L.D.	S.D.
2286	3555
2900	4800
1777	3000
2231	3646

Blood from a vein of the wing.

GRANIVORÆ.

Great Titmouse (*Parus major*, Linn.).

L.D.	S.D.
2133	4000
2000	
2900	4800
1777	3200
2132	3892

Blood from a vein of the wing.

Digitized by Google

Blue Grosbeak (*Loxia cærulea*, Linn.).

L.D.	S.D.
2286	3555
2900	5333
1895	3000
2290	3740

Blood from a vein of the thigh of a female.

Whidah Bird (*Vidua paradisæa*, Cuv.).

L.D.	S.D.
2000	3555
1777	
2900	5333
1684	3000
1998	3740

Nuclei.

3555	10666

Blood from a vein in the wing.

COLUMBÆ.

Crowned Pigeon (*Columba leucocephala*, Ray).

L.D.	S.D.
2000	3555
2900	4800
1777	3000
2132	3646

Blood from a vein of the pinion.

Moustache Pigeon (*Columba mystacea*, Temm.).

L.D.	S.D.
2000	3200
2900	4800
1714	3000
2100	3512

Blood from a vein of the pinion.

GALLINÆ.

Bonham's Partridge (*Perdix Bonhami*, Fraser).

L.D.	S.D.
2000	3200
1895	3555
2400	4000
1600	2666
1933	3282

Nuclei.

4570	10666

Blood from a vein of the thigh of a female.

GRALLATORES.

Scarlet Ibis (*Ibis ruber*, Lacep.).

L.D.	S.D.
2000	3200
1777	
2666	4500
1600	2400
1948	3153

Blood from a vein of the wing.

Lesser Bittern (*Ardea minuta*, Linn.).

L.D.	S.D.
2000	4000
1895	
2400	5000
1777	3000
1993	3827

Blood from a vein of the wing.

"Descriptions of new species of *Scalaria*, collected by Mr. H. Cuming, to be figured in the fourth part of Thesaurus Conchyliorum," by G. B. Sowerby, Jun., Esq.

SCALARIA ALATA, Thes. Conch. part 4. pl. 32. f. 10, 11. *Scal. testâ subventricosâ, lævi, umbilicatâ; anfractibus separatis; varicibus* 8 (*anfractu ultimo* 7), *latis, distantibus, laminatis, extantibus, posticè*

Digitized by Google

propè medium, obtusè angulatis; aperturâ ovali, margine subquadrato; colore inter varices, in medio anfractuum, fulvo vel castaneo. Long. 0·95; lat. 0·50; ex. var. poll.

Hab. Catanauan, pr. Tayabas, ins. Luzon. H. Cuming legit. Found in sandy mud at eight to ten fathoms.

Scalaria fasciata, Thes. Conch. part 4. pl. 32. f. 12, 13. *Scal. testâ subventricosâ, lævi, umbilicatâ; anfractibus separatis; varicibus 7, sublatis, distantibus, laminatis, extantibus, posticè propè suturam acutè angulatis; aperturâ parvâ; colore albo, fasciâ fuscâ latâ inter varices in medio anfractuum.* Long. 0·80; lat. 0·40 poll.

Hab. Catanauan, pr. Tayabas, ins. Luzon. H. Cuming legit.

Differing from *Sc. alata* in being a somewhat more elongated shell, in having the varices narrower, and their angle more elevated and more acute. The colour is lighter and the band more distinct. Found in sandy mud at eight to ten fathoms.

Scalaria marmorata, Thes. Conch. part 4. pl. 32. f. 9. *Scal. testâ pyramidali, subventricosâ, lævi, umbilicatâ; anfractibus separatis, varicibus distantibus, laminatis, extantibus, continuis, propè medium obtusissimè angulatis; colore albo, fusco marmorato.* Long. 0·85; lat. 0·40 poll.

Hab. India.

We have no information as to the locality of this species, which differs from *Sc. alata* in having the angle of the varices very obtuse and nearer the centre of the whorl. The specimens are beautifully marbled with dull brown. Mr. Cuming's collection.

Scalaria replicata, Thes. Conch. part 4. pl. 32. f. 23, 24. *Scal. testâ brevi, subventricosâ, lævi, umbilicatâ, anfractibus separatis; varicibus 7 distantibus, laminatis, extantibus, continuis, validè replicatis, propè suturam angulatis; colore albo.* Long. 0·60; lat. 0·32 poll.

Hab. Ins. "Lord Hood's." H. Cuming legit.

Found on coral reefs; shorter than the preceding and having the varices folded backwards.

Scalaria hyalina, Thes. Conch. part 4. pl. 32. f. 21, 22. *Scal. testâ tenui, glabrâ; anfractibus latè separatis, angustis; varicibus distantibus, laqueatis, extantibus; colore albo.* Long. 0·40; lat. 0·21 poll.

Hab. Ins. Catanauan et Batangas, ins. Luzon, Philippinarum. H. Cuming legit.

This small species has the whorls widely separated from each other and the varices few, distant, and beautifully fluted. Found in sandy mud at eight to ten fathoms.

Scalaria laxata, Thes. Conch. part 4. pl. 32. f. 8. *Scal. testâ tenui, lævi; anfractibus latè separatis, varicibus numerosis, subregularibus, laminatis, simplicibus; aperturâ ovali; colore albo.* Long. 0·76; lat. 0·37 poll.

Digitized by Google

Hab. Ins. Catanauan, pr. Tayabas, ins. Luzon, Philippinarum. H. Cuming legit.

The whorls are separated, as in *Sc. hyalina*, but the varices are numerous and simple. Found in sandy mud at eight to ten fathoms.

SCALARIA PYRAMIDALIS, Thes. Conch. part 4. pl. 32. f. 4. *Scal. testâ pyramidali, acuminatâ, lævi; anfractibus separatis; varicibus extantibus 9 subcrenulatis, propè suturam in angulum acutum productis, ad suturam junctis; aperturâ ovali; labio interno crasso; colore albo.* Long. 1·20; lat. 0·50 poll.

Hab. Ins. Caminguing, Philippinarum. H. Cuming legit.

Taken in sandy mud at thirty fathoms.

Resembling *Sc. communis*, but more pyramidal in form, more tapering towards the apex, and the somewhat more laminated and projecting varices have a sharp angle near the centre. The most perfect specimen is in the collection of the Rev. J. F. Stainforth.

SCALARIA PHILIPPINARUM, Thes. Conch. part 4. pl. 32. f. 1, 2, 3. *Scal. testâ elongatâ, acuminatâ, lævi; anfractibus numerosis, paululùm separatis; varicibus distantibus, tenuibus, obliquis, supernè vix angulatis, ad suturam junctis; colore inter varices pallidè fulvo, vel castaneo-nigricante. Variat colore albo.* Long. 0·95; lat. 0·27 poll.

Hab. Catanauan, pr. Tayabas, ins. Luzon, Philippinarum; H. Cuming legit: et Amboyna, legit R. B. Hinds.

An elongated shell, the principal variety of which is of a chestnut colour between the varices. Found in sandy mud at eight to ten fathoms.

SCALARIA ACULEATA, Thes. Conch. part 4. pl. 32. f. 35, 36, 37. *Scal. testâ pyramidali, lævi, acuminatâ; anfractibus vix separatis; varicibus laminatis, reflexis, anticè subrotundatis, propè suturam in dentem acutum productis, ad suturam plicatim junctis. Variat varicibus crassis, colore albo, vel pallidè fulvo.* Long. 0·56; lat. 0·22 poll.

Hab. Hong Kong, China, et Macassar, Malacca, Amboyna; R. B. Hinds legit: ad Bais, ins. Negros, et ad Catanauan, ins. Luzon; H. Cuming legit.

Some specimens were taken at Bais, isle of Negros, in coarse sand at six fathoms.

SCALARIA GRACILIS, Thes. Conch. part 4. pl. 32. f. 33, 34. *Scal. testâ aculeatâ simili, sed multùm graciliori.*

Hab. Dumaguete, ins. Negros, Philippinarum. H. Cuming legit.

So much narrower in proportion to its length than the preceding species as to justify the distinction, which has not been made without hesitation. Found in coarse black sand at seven fathoms.

SCALARIA MITRÆFORMIS, Thes. Conch. part 4. pl. 32. f. 30. *Scal. testâ pyramidali, lævi, tenui, acuminatâ; anfractibus vix separatis; varicibus distantibus, laminatis, extantibus, angulatis, ad angulum in dentem acutum elevatis; colore albo.*

Digitized by Google

Hab. Guacomayo, Amer. Merid. H. Cuming legit.

The only specimen we have seen is in Mr. Cuming's collection; it bears a very near resemblance to the common West Indian species named *Sc. muricata* by Kiener, from which it differs in having the angle of the varices elevated into a tooth or point. It is also a thinner shell, with the laminated varices narrower. Found in sandy mud at a depth of eleven fathoms.

SCALARIA VENOSA, Thes. Conch. part 4. pl. 33. f. 72, 73. *Scal. testâ pyramidali, lævi, acuminatâ, imperforatâ; anfractibus prominentibus vix contiguis; varicibus* 12, *proximis, crassis, in medio validè reflexis, tumidis, posticè angulatis, propè suturam subangustatis; aperturâ rotundatâ, colore inter varices pallidè fulvo.*

Hab. Nevis, Indiâ occidentali.

Remarkable for the shape of the varices, which are turned backward and rounded, giving the appearance of tumid veins; the interstices, which are narrow, are of a delicate fawn-colour.

SCALARIA LYRA, Thes. Conch. part 4. pl. 33. f. 38, 39; pl. 34. f. 81, 82. *Scal. testâ ventricosâ, acuminatâ; anfractibus prominentibus, rapidè crescentibus, propè suturam elevatis, suturâ profundâ distinctis; varicibus tenuibus, numerosissimis, obliquis; aperturâ magnâ, ovali; labio interno tenui, obliquo; umbilico parvo; colore pallidè fulvo, fasciis duabus fuscis plus minusve distinctis.*

Hab. Ins. Masbate, Philippinarum. H. Cuming legit.

A beautiful species, with ventricose whorls, which are distinguished by a very deep suture. The varices are thin, close, regular and oblique. The colour is pale brown or dull white, with two bands of deeper or paler brown. Found in sandy mud at five fathoms.

SCALARIA DUBIA, Thes. Conch. part 4. pl. 33. f. 41. *Scal. testâ ventricosâ, acuminatâ, minutè striatâ; anfractibus subprominentibus, suturâ profundâ distinctis, rapidè crescentibus; varicibus numerosis, paululùm expansis; aperturâ magnâ, subovali; labio externo tenui, labio interno subexpanso; umbilico parvo; colore albo.*

Hab. Ticao, Philippinarum. H. Cuming legit.

The imperfect specimen in Mr. Cuming's collection is the only one which we have seen. Taken on reefs.

SCALARIA IRREGULARIS, Thes. Conch. part 4. pl. 33. f. 40, 60. *Scal. testâ ventricosâ, acuminatâ, lævi; anfractibus contiguis, rotundatis, gradatim crescentibus; suturâ distinctâ; varicibus tenuibus, numerosis, inæqualibus, nonnullis magnis; aperturâ obliquè ovali; umbilico mediocri; colore albo.*

Hab. Catanauan, pr. Tayabas, ins. Luzon, Philippinarum. H. Cuming legit.

The varices of this species are rather thin and numerous, with sharp edges; some are much thicker than others. Found in sandy mud at eight to ten fathoms.

SCALARIA IMPERIALIS, Thes. Conch. part 4. pl. 33. f. 56, 57.

Digitized by Google

Scal. testâ pyramidali, ventricosâ, acuminatâ, lævi; anfractibus magnis, rotundatis, contiguis, propè suturam elevatis, gradatim crescentibus, suturâ profundâ; varicibus numerosis, simplicibus, versùs apicem tenuibus, gradatim crescentibus, in ultimo anfractu crassis, nonnullis duplicatis et triplicatis; aperturâ magnâ, ovali; umbilico magno; colore inter varices pallidè fulvo, fasciis binis fuscis in medio anfractûs ultimi purpureo confusis.

Hab. Swan River.

A beautiful pyramidal shell, with numerous regular varices, which in the upper whorls are thin, but in the last whorl are thicker, some of the last being doubled. The colour between the varices is dull fawn, with two bands, which in the last whorl are blended with purple.

"Description of new species of *Mytilacea*, &c.," by Sylvanus Hanley, Esq.

Modiola Metcalfei. *Mod. testâ subtriangulari, oblongâ, ventricosâ, posticè albo-cærulescente, anticè purpureâ, obsoletè barbatâ, epidermide flavo-fuscescente indutâ; epidermide, prope marginem dorsalem, subelongatum, valdè elevatum, et ad extremitatem posticam brevem, angustam, sursùmque prominentem, nitoris experte; costâ umbonali, prope ad nates purpureas, acutas, obtusè subcarinatâ; angulo dorsali distincto, elevato; margine antico subrecto, nunquam incurvato; extremitate anticâ sublinguiformi, rotundatâ; margine ventrali in medio incurvato, posticè valdè obliquo; superficie internâ anticè purpureo tinctâ.* Long. 1·70; lat. 3·0 poll.

Hab. —— ? Mus. Cuming, Hanley.

The more prominent characters are the compressed and very distinct dorsal angle, the purple beaks, the elevated umbonal ridge, and the absence of all glossiness from the narrow strip of epidermis which adjoins the ligamental edge, and from that lunule-shaped portion which forms the posterior extremity and curves upwards to the beaks. I have named it in honour of one of our most scientific collectors, W. Metcalfe, Esq., of Lincoln's Inn.

Modiola striatula. *Mod. testâ elongato-oblongâ, angustâ, subarcuatâ, subcylindraceâ, epidermide olivaceâ indutâ; latere postico brevi radiatim costulato, costis paucis, distantibus; latere antico producto, tenuissimè radiatim striato, striis ad extremitatem anticam elevatis, divaricatis; aream intermediâ lævigatâ; margine dorsali subrecto, vix elevato, marginis antici convexi longitudinem æquante; margine ventrali incurvato; angulo dorsali inconspicuo; umbonibus planulatis; superficie internâ purpureâ; cardine, ad extremitatem ligamenti, crenato.* Long. 0·60; lat. 1.40 poll.

Hab. Batangas, insularum Philippinarum. Mus. Cuming, Hanley.

Closely similar to *plicata* in shape, sculpture, and the colour of its epidermis; the rich purple of its interior, its smaller size, and the greater delicacy of its markings, at once proclaim its distinctness. It is usually rayed anteriorly with narrow interrupted black streaks.

Modiola subramosa. *Mod. testâ oblongo-angustatâ, subventri-*

Digitized by Google

cosâ, posticè lævi, anticè costatâ, epidermide flavo-rufescente indutâ; costis planulatis, radiantibus, furcatis, subramosis, distantibus; margine cardinali brevissimo, subrecto; margine antico primum incurvato et vix declivi, deindè convexo et abruptè declivi; ventrali incurvato; extremitate anticâ subbiangulatâ, valdè compressâ; carinâ umbonali conspicuâ, in junioribus acutâ; superficie internâ, anticè purpureo tinctâ; cardinis extremitatibus crenatis; angulo dorsali parùm elevato. Long. 0·55; lat. 1·30.

Hab. Cagayan, pr. Misamis, insulæ Mindanao.

Mus. Cuming, Hanley.

Closely allied to *M. sulcata* of Lamarck, but in that species the rib-like striæ are crowded and numerous. The beaks are all but terminal, acute, and incurved.

Modiola Philippinarum. *Mod. testâ ovato-oblongâ, tumidâ, lævi, anticè barbatâ; epidermide nitidâ, fulvo-castaneâ, in medio pallescente, indutâ; angulo dorsali distincto, rotundato; margine dorsali elevato, subelongato, convexiusculo; antico breviore, subrecto, subincurvato; extremitate anticâ latâ, rotundatâ; posticâ brevi, prominulâ, nitore epidermidis orbatâ; natibus angustis, conspicuis; carinâ umbonali prominente; superficie internâ, anticè atropurpureâ.* Long. 2·20; lat. 4 poll.

Hab. Zebu, Philippinarum. Mus. Cuming, Hanley.

Possessing a sort of general resemblance to *M. Modiolus*, its more elongated hinge-margin, and the greater projection of its hinder extremity, suffice to distinguish it from that species. The rich internal colouring of its anterior slope, and the peculiarity of the lunule-like posterior space, which is destitute of lustre, form the principal features of its characteristics.

Modiola biradiata. *Mod. testâ oblongo-trigonâ, lævigatâ, ventricosâ; sub epidermide sordidè fulvâ, anticè purpureo tinctâ, deindè radio albido ornatâ, areâque posticâ pallidè brunneâ et radio pallidiore ad extremitatem ejus prominulam notatâ; margine cardinali elevato, subrecto, elongato; angulo dorsali distincto; margine ventrali medio incurvato; antico subrecto, elongato, paululùm retuso; extremitate anticâ productâ, rotundatâ; carinâ umbonali prominente; superficie internâ anticè purpureâ.* Long. 1·25; lat. 2·50.

Hab. ——? Mus. Metcalfe.

The glossy epidermis, which is apparently destitute of any distinct beard, although sufficiently rough on the anterior slope to render its occasional presence not improbable, ceases entirely just before reaching the hinge-margin, leaving a long narrow strip of dull dusky purple. Its general shape closely resembles *albicosta* of Lamarck, with which briefly-described species it has doubtless been confused by the majority of collectors. That species, however (whose original type I carefully examined at Paris), differs both in other respects and by the clear fawn-colour of its epidermis.

Modiola strigata. *Mod. testâ parvâ, tenuissimâ, subdepressâ, oblongâ, virescente, strigis undulatis fusco-purpureis, irregulariter*

Digitized by Google

pictâ; latere antico radiatim striato, dilatato, anguli dorsalis experte; latere postico brevissimo, longitudinaliter costulato; margine cardinali elongato, convexo; antico arcuato; ventrali medio convexiusculo. Long. 0·25; lat. 0·50 poll.

Hab. Sibango, isle of Zebu; in ten fathoms, sandy mud. Mus. Cuming, Hanley.

For this and the succeeding species we are indebted to the researches of H. Cuming, Esq., in the Philippine Islands. The shell, though small, is far from inelegant, and unites the contour of the British *discrepans* with the zigzag markings of the African *Owenii*.

MODIOLA ARCUATULA. *Mod. testâ elongatâ, angustâ, subarcuatâ, compressâ, lævigatâ, tenuissimâ, anguli dorsalis experte; sub epidermide fulvo-viridescente, strigis undulatis, purpureo-brunneis, anticè transversim ornatâ; costâ umbonali pallidâ, prominente; margine cardinali elongato, antico brevi, valdè arcuato; ventrali incurvato; extremitate anticâ dilatatâ, rotundatâ; posticâ rotundatâ, prominente, valdè attenuatâ, costellis paucis radiatâ; superficie internâ, anticè purpureo tinctâ.* Long. 0·50; lat. 1·50.

Hab. Singapore, at low water. Mus. Cuming, Hanley.

Belonging to that division of *Modiolæ* which is destitute of any dorsal angle, it is remarkable for its narrow sickle-shaped contour, and the few narrow ribs of its posterior extremity.

MODIOLA SORDIDA. *Mod. testâ oblongâ, ventricosâ, epidermide olivaceâ indutâ; areâ anticâ lamellis concentricis, membranaceis, cinereo-fulvis, vestitâ; lamellarum margine barbato; costâ umbonali prominente; angulo dorsali obtusissimo; margine cardinali breviusculo, parùm elevato; antico elongato, in adultis retuso; ventrali incurvato; extremitate posticâ brevissimâ, obtusissimâ; superficie internâ, anticè purpureo tinctâ.* Long. 1·25; lat. 2·65.

Hab. ——? Mus. Metcalfe.

The shape of this ugly species closely resembles that of *M. Modiolus*, but the colour of its epidermis and its peculiar beard will easily distinguish it. This latter appendage is composed of a dull-looking, membranaceous, ashy-coloured substance, formed of lamellæ, which near the ventral edge curl upwards towards the beaks; the edges are here and there fringed with elongated lanceolate filaments. The umbonal ridge is edged posteriorly by a paler streak, which is not sufficiently distinct however to be termed a ray.

LITHODOMUS CANALIFERUS. *Lit. testâ elongato-oblongâ, subcylindraceâ, rectâ, lævigatâ, epidermide castaneâ sub tegmine calcareo indutâ; tegmine in lineis elevatis, crassis, radiantibus, supernèque opertis, anticè ordinato; sulco obliquo ex umbonibus ad marginem ventralem subrectum et leviter convexiusculum, anticè decurrente; margine cardinali subincurvato, elongato, leviter elevato; antico dorsali, subrecto; extremitate anticâ obtusissimâ, posticâ vix angustatâ.* Long. 0·65; lat. 2.

Hab. Found in rocks, isle of Zebu. Mus. Cuming, Hanley.

At once recognisable by the extraordinary arrangement of its

Digitized by Google

calcareous coating over the umbonal slope, on which are placed three oblique covered canals, formed by four radiating ridges, with another coating of calcareous matter spread above them, leaving the apertures distinctly visible at the anterior extremity.

LITHODOMUS PLUMULA. *Lit. testâ* L. canalifero *simillimâ, sed extremitate anticâ minus obtusâ; tegmine calcareo antico, crassiore, atque in parietibus confertis, subparallelis ordinato; parietibus corrugatis et (plumulæ haud dissimilibus) versus marginem ventralem et marginem anticum utroque latere radiantibus.* Long. 0·75; lat. 2·35.

Hab. Panama, in *Spondyli*. Mus. Cuming, Hanley.

Were it not for the calcareous coating of the umbonal ridge, this curious shell could scarcely be discriminated from the preceding species. This coating is of a cellular structure, and is composed of numerous rather elevated narrow ridges, which slope forward, and so radiate on either side from the middle as to remind us of a ruffled feather.

MYTILUS GRANULATUS. *Myt. testâ parvâ, ovali-triangulari, tumidâ, crassâ, radiatim costulatâ; costis distinctis, angustioribus, rotundatis, granulatis, plerumque bifurcatis; epidermide ochraceo-flavescente; margine cardinali brevi, convexo; antico valdè arcuato, dilatato; ventrali subincurvato; natibus maximè incumbentibus divaricatis; angulo dorsali rotundato; latere postico planulato, valdè tumido; superficie internâ albâ, submargaritaceâ; margine interno crenulis dentato.* Long. 0·50; lat. 0·75.

Hab. Valparaiso, under stones at low water. Mus. Cuming, Metcalfe, Hanley.

A species easily to be distinguished by its narrow granulated ribs (which become still narrower on the flattened posterior slope) and by the peculiarity of its beaks, which slope so greatly back as to cause the shell to appear blunt and almost truncated at that part. The hinge, as in most of this genus, is provided with two teeth in one valve, and one in the other.

"A description of new species of recent Shells," chiefly from the collection of W. Metcalfe, Esq.

AMPHIDESMA SCABRUM. *Amph. testâ obovatâ, convexâ, solidâ, subæquilaterali, albâ, lineis rubro-castaneis radiatâ, concentricè lamelliferâ; lamellis brevibus, tenuibus confertis, interstitiis minutissimè longitudinaliter striatis; latere antico subangulato, postico rotundato; margine ventrali arcuato, anticè sinuato; intùs pallidè aurantiâ, lunulâ, foveâque ligamentali rubro-purpureâ.* Long. 0·2; lat. 2¼ poll.

Hab. Boljoon, insula Zebu. Mus. Cuming, Metcalfe.

AMPHIDESMA ZEBUENSE. *Amph. testâ obliquè ovatâ, solidâ, valdè inæquilaterali, convexiusculâ, albidâ, radiis pallidè rubris ornatâ, concentricè lamelliferâ; lamellis brevibus confertis, interstitiis striâ elevatâ concentricâ, plerumque notatâ; latere antico brevi,*

Digitized by Google

rotundato; marginе postico incurvato, ventrali valdè arcuato; intùs albâ, ad umbones rubro biradiatâ. Long. 1¾; lat. 2.

Hab. Zebu, Philippinarum. Mus. Metcalfe, Cuming.

This elegant shell bears some resemblance to the preceding, but its shape alone would be sufficient to distinguish it. The colouring matter seems to be deposited only on the lamellæ. The lunule is rather large for this genus.

Glauconome virens; Solen virens, Linn. Syst., p. 1115. *Gl. testâ oblongo-elongatâ, subtenui, valdè inæquilaterali, ad umbones tumidâ, albidâ; epidermide tenui, viridi, vix nitidâ, obsoletè longitudinaliter rugosâ, vestitâ; latere postico rotundato; antico producto, acuminato, subrostrato, transversim rugoso; margine ventrali vix arcuato, leviter in medio incurvo; intùs albidâ.* Long. 1; lat. 2¼ poll.

Hab. Java and China?

This extremely rare shell, concerning which Mr. Dillwyn remarks that no subsequent author has recognized it, still exists in Linnæus' cabinet, and with the exception of a few young shells in the collection at the Chinese Exhibition, I have never met with any specimens elsewhere.

Odostomia eulimoides. *Od. testâ oblongo-turritâ, nivеâ, lævi, politâ, subpellucidâ; anfractibus quinque, convexiusculis, ultimo spiram æquante; suturâ distinctâ; aperturâ oblongâ, lævi, plicâ dentiformi labii interioris in medio; labio exteriore ad basim subeffuso, margine vix convexo.* Long. 0·18; lat. 0·08 poll.

Hab. Guernsey.

Odostomia Rissoides. *Od. testâ oblongo-conicâ, albâ, lævi, nitidâ; anfractibus quinque, convexiusculis, ultimo spiram æquante; suturâ distinctâ; aperturâ duplicem quintam partem totius longitudinis æquante, plicâ columellari pænè obsoletâ; labio exteriore intùs lævi.* Long. 0·18; lat. 0·09 poll.

Hab. Guernsey.

Allied to the last, but the mouth is far smaller in proportion to the length of the spire. The plait lies so far back on the columella as not to be discerned by the careless observer.

Odostomia turrita. *Od. testâ turritâ, nivеâ, lævi, nitidâ; anfractibus quinque, convexiusculis; suturâ obliquâ; aperturâ subreniformi, quartam partem totius longitudinis æquante; plicâ dentiformi e parte superiore columellæ prominente.* Long. 0·12; lat. 0·04.

Hab. Guernsey.

The delineations of these last three species will appear in the 'British Marine Conchology.' The shells are from the cabinet of W. Metcalfe, Esq., and were procured by him on one of the islets near the coast of Guernsey.

Digitized by Google

February 27, 1844.

Professor Owen in the Chair.

The Secretary read communications from G. W. A. Drummond Hay, Her Majesty's Consul-General at Tangier, and Capt. Fayrer, H.M.S. 'Tenedos,' Bermuda (both Corresponding Members); the latter was accompanied by two specimens of the *Strix Nyctea*, which Capt. Fayrer presented to the Society.

Mr. Lovell Reeve described seven new species of *Glauconomè*, a genus of fluvio-marine Mollusks of the family *Solenacea*.

The genus *Glauconome* was introduced some years since by Mr. J. E. Gray in his 'Spicielegia Zoologica,' with the description of a single species collected by John Reeves, Esq. in China. Another species appears to have been described by the great author of the 'Systema Naturæ' under the title of *Solen virens*, the original examples of which are still preserved in the collection of the Linnæan Society; and I have now the pleasure of exhibiting seven new species, which by their characters and habits add materially to the generic importance of the group.

The Glauconomes are of a light semi-perlaceous structure, covered with a thin light green horny epidermis, which in some species is very peculiarly wrinkled or shrivelled, and inflected over the margin, and their hinge is composed of three irregular forked teeth in each valve, some of which are generally bifid. They live in brackish water (in the mud) in the mouths of rivers at their confluence with the sea, and have only been found as yet in the Eastern hemisphere. Out of nine species with which we are now acquainted, the localities of eight are known to be as follows: one inhabits the rivers of China; one the Ganges and probably other rivers of India; three inhabit certain rivers running into the bay of Manila; and three, certain small rivers in the islands of Zebu, Negros and Luzon, of the Philippines; the last six having been collected in those particular localities by H. Cuming, Esq.

The place selected by Mr. Gray for the genus *Glauconome* in the natural system was in his family of the *Veneridæ*; it appears to me, however, to exhibit a much stronger affinity with the *Solenacea*; in my arrangement in the 'Conchologia Systematica,' I referred it to that family, and I am happy to say that the propriety of this removal has been subsequently confirmed.

The following are descriptions of the seven new species:—

1. Glauconome rugosa. *Glauc. testâ elongato-oblongâ, rugosâ, circiter umbones plus minusve erosâ, lateribus rotundatis; epidermide peculiariter corrugatâ, latere postico subobsoletè angulato.* Conch. Icon. pl. 1. f. 4. *a* and *b*.

Digitized by Google

Hab. The mouths of rivers running into the bay of Manila.

This species, which is by far the largest of the genus, presents a very peculiar arrangement of the epidermis. Over about one-third of the length of the shell from the posterior extremity, the epidermis lies in narrow ridges parallel with the lines of growth; these ridges are then suddenly directed towards the umbones, and become dispersed over the remaining portion of the shell in the form of shrivelled wrinkles scattered in the contrary direction.

2. GLAUCONOME STRAMINEA. *Glauc. testâ subelongato-ovatâ, circiter umbones erosâ, latere antico rotundato, postico subattenuato, leviter angulato, rotundato; epidermide nitidâ, viridescente-stramineâ, angulum super corrugatâ.*

Conch. Icon. pl. 1. f. 2.

Hab. Mouths of rivers running into the bay of Manila.

A light delicate straw-coloured shell, slightly angulated on the posterior side, with the epidermis lying on the angle in wrinkles.

3. GLAUCONOME RADIATA. *Glauc. testâ oblongo-ovatâ, compressiusculâ, corneâ; purpureo-radiatâ; epidermide viridescente prope marginem indutâ, lateribus rotundatis, postico subacuminato.*

Conch. Icon. pl. 1. f. 3.

Hab. Mouth of a small river at San Nicolas, island of Zebu, Philippines.

This is a very pretty species, vividly rayed inside and outside with violet-purple.

4. GLAUCONOME CORRUGATA. *Glauc. testâ elongato-ovatâ, subtilissimè striatâ, circiter umbones erosâ, lateribus rotundatis, postico acuminato-angulato; epidermide angulum super corrugatâ, intùs vividè purpureo-radiatâ.*

Conch. Icon. pl. 1. f. 6.

Hab. Mouths of rivers running into the bay of Manila.

The posterior side of this species is more elongately angled than that of any other; the epidermis is wrinkled over the posterior half of the shell, and the interior is vividly rayed with purple.

5. GLAUCONOME ANGULATA. *Glauc. testâ elongato-oblongâ, striatâ, circiter umbones plus minusve erosâ, latere antico rotundato, postico angulato, carinâ obtusâ ab umbonibus ad marginem decurrente.*

Conch. Icon. pl. 1. f. 5.

Hab. Mouth of a small river at Jinigaran, island of Negros, Philippines. Rather a dingy, short, angulated species.

6. GLAUCONOME CURTA. *Glauc. testâ ovatâ, curtâ, tenui, subtilissimè striatâ, ad umbones paululùm erosâ, lateribus rotundatis, intùs cæruleo-carneo tinctâ.*

Conch. Icon. pl. 1. f. 7.

Hab. Mouth of a river in Agoo, province of Pangasinan, island of Luzon, Philippines.

A very delicate species, with a fine smooth silken epidermis, short,

Digitized by Google

and but very faintly angulated on the posterior side. Interior rich purple.

7. Glauconome cerea. *Glauc. testâ oblongo-ovatâ, pallidè stramineâ, subtilissimè striatâ, lateribus rotundatis, postico subangulato-attenuato.*

Conch. Icon. pl. 1. f. 8.

Hab. Mouth of the Ganges.

A very delicate pale straw-coloured shell, with a smooth silken epidermis.

"Description of new species of Shells, by Mr. Hinds."

Six species of *Triton*, from the collection of Sir Edward Belcher, C.B.

Triton, Montfort.

1. Triton vestitus. *Tr. testâ ovatâ, solidâ, fuscâ; anfractibus rotundatis, transversim striatis, lineis longitudinalibus decussantibus præcipuè spiræ nodulosis, ultimo albo fasciato; aperturâ elongatè ovali; labro incrassato, intùs dentibus geminis albis, undiquè purpurascentibus; columellâ purpurascente vel nigrâ, plicis albis varicosâ; fauce albâ; epidermide valdè lamellosâ, pilis nigris numerosis indutâ.* Axis 27 lin.

Hab. Realejo, gulf of Nicoya, and bay of Honda, west coast of America.

2. Triton bracteatus. *Tr. testâ ovatâ, elongatâ, longitrorsum costatâ, transversim striatâ, maculis parvis nigris seriatim dispositis ornatâ; spirâ aperturam superante; aperturâ parvâ, albâ, denticulatâ; canali breviusculo.* Axis 8 lin.

Hab. Marquesas; New Ireland; Straits of Malacca: on the shores and in seventeen fathoms, mud.

3. Triton truncatus. *Tr. testâ solidâ, fulvâ, fusco nebulosâ, truncatâ, longitrorsum costatâ, striis decussantibus; costis rotundatis, confertis, anfractu ultimo pallidè fasciato; aperturâ albâ, denticulatâ; canali breviusculo.* Axis 6 lin.

Hab. New Ireland; among the coarse sand of the shore.

4. Triton antiquatus. *Tr. testâ elongatâ, turritâ, subcylindraceâ, lineis decussantibus textili, costis propè suturam evanidis; spirâ aperturam duplò vel triplò superante; apice eroso; aperturâ parvâ, subquadratâ, pallidâ; labio interno anticè valdè producto.* Axis 10 lin.

Hab. New Ireland; with the preceding.

5. Triton fictilis. *Tr. testâ ovatâ, solidulâ, cinereâ; anfractibus senis rotundatis, longitrorsum obliquè plico-costatis, transversim tenuiter striatis; spirâ aperturam vix superante; aperturâ callosâ, contractatâ, politâ, intùs lævigatâ.* Axis 7 lin.

Hab. Lagulhas Bank, Cape of Good Hope; in between fifty and sixty fathoms.

Digitized by Google

6. TRITON ANOMALUS. *Tr. testâ ovatâ, fuscâ, longitrorsum costatâ, lineis transversis elevatis cancellatâ; spirâ aperturam æquante; suturâ validâ; evaricosâ; aperturâ ovali, pallidâ; canali brevius-culo.* Axis 7 lin.

Hab. Island of Quibo, Veragua; on the sandy shore at low water.

SOLARIUM, Lamarck.

At the sale of the collection of shells of Mr. Imwood, several lots of *Solarium* came into my possession; and as it was a favourite group with this gentleman, he, as might naturally be supposed, had assembled together many very interesting specimens. The full suites of some of the species have enabled me better to draw a line of distinction between them, and has afforded grounds for regarding several of the following as perfectly distinct and hitherto undescribed species. In addition to the above, I have had before me the collections of Sir Edward Belcher and Mr. Cuming, both rich in novelty, but more particularly in the careful and accurate detail of localities and circumstances of habitation. The whole permits me to record fourteen new species in a genus which previously seemed to contain about fifteen recent and forty-nine fossil species.

1. SOLARIUM FORMOSUM. *Sol. testâ orbiculato-conicâ, politâ, fasciatâ; anfractibus subtumidis, supernè sulco unico divisis, inferioribus lævigatis, spiræ plico-striatis, supernè fusco, albo, et atro-fusco deinceps fasciatis, mediò subcorneis; ad basin planulatâ, aperturâ quadratâ; umbilico patulo, crenis rectis, subacutis, fuscatis; aream umbilicali latâ, sublævigatâ.* Diam. 18, umbilic. 3½ lin.

Chemnitz, vol. v. t. 172. f. 1693.

Hab. Amboina. Cab. Hinds.

This fine shell has hitherto, most probably, been considered only as a variety of the well-known species *S. perspectivum*; it is however sufficiently distinct. In shape it is considerably more elevated and conical, and it is ornamented with rich fasciations of brown and white. Near the upper part of each whorl a narrow sulcus separates a narrow portion. The base is flattened and polished; umbilicus moderately dilated, being less so than in *S. perspectivum*, and armed on the margin with a row of straight sharp crenules, on their right faces of a darker brown colour. The umbilical area, or the space between the spirally twisted row of crenules, is smooth, except for the arched striæ of growth.

2. SOLARIUM PLACENTALE. *Sol. testâ discoideâ, pallidè fulvâ, lævigatâ; spirâ valdè depressâ; anfractibus planulatis, ordinatè spiraliter striatis; ad peripheriam obtusè unicarinatâ, subtùs striatâ; carinâ crenulatâ; ad basin subtumidâ; aperturâ triangulari; umbilico valdè patulo, crenis tuberculatis subdistantibus armato.*

Hab. Bay of Magdalena, California; in seven fathoms, sand. Cab. Belcher.

3. SOLARIUM PERDIX. *Sol. testâ conoideâ, tenui, lævigatâ, pallidâ; anfractibus subtumidis, supernè cingulo unico divisis, spiræ minutè*

Digitized by Google

plico-striatis; ad peripheriam angulatâ tricarinatâ, carinâ mediâ prominente, majore, creniferâ; cingulo et carinis maculis rufis subquadratis ornatis; umbilico patulo, crenulis parvis albis cincto. Alt. 6, diam. 14 lin.

Hab. Ceylon; north-west coast of Australia.

Cab. Cuming and Hinds.

Possesses the general contour of *S. perspectivum*, but is thinner; the whorls are slightly tumid, and furnished above with a flat smooth girdle, ornamented with somewhat distant rufous spots. The most prominent keel is characteristically covered with small tubercular crenulations. When placed on its base the apex is much inclined, and the general direction oblique. The umbilicus is somewhat less patulous than in *S. perspectivum*, and neatly encircled with numerous white and smaller crenations. The umbilical space is destitute of ribs, folds, or keels, bearing alone the marks of the striæ of growth and a thin horny epidermis.

4. Solarium quadriceps. *Sol. testâ orbiculato-discoideâ; anfractibus quadriseriatim cingulatis; cingulis tuberculis quadratis, planulatis, approximatis instructis, inferiore majore, et cum superiore rufo picto; ad basin tumidâ, aree mediand radiatim plicatâ; umbilico patulo, crenis magnis fuscis cincto; aree umbilicali lævi.* Alt. 5, diam. 11 lin.

Hab. Bay of Panama; in five fathoms, among mud.

Cab. Belcher.

Very closely allied to *S. granulatum*, from which it will be found to differ in the character and relative proportion of the granular girdles. A single and perhaps rather small specimen was alone obtained, which is somewhat more discoid than the above species; four girdles traverse each whorl, of which the inferior is the largest, and the tubercles closely set, flattened, and obliquely square; the umbilicus is rather more expanded, and the marginal tubercles are of a similar size, but coloured of a reddish brown. *S. quadriceps* is an American shell, and *S. granulatum* an Asiatic.

5. Solarium asperum. *Sol. testâ discoideâ; spirâ retusâ; anfractibus supernè planulatis, infernè rotundatis, ubiquè cingulis parvis numerosis instructis; cingulis tuberculis parvis asperatis; umbilico valdè patulo; aree angustâ, lævi.* Alt. $1\frac{1}{2}$, diam. $4\frac{1}{2}$ lin.

Hab. Straits of Macassar; in eleven fathoms, coarse sand.

Cab. Belcher.

A single dead specimen only was obtained, destitute of colour and choked with sand. It is remarkable from its rounded base and its very expanded umbilicus, which is proportionately larger than in any other species. In *S. perspectivum* the umbilicus is equal to a third of the diameter, but in the present species it is two-fifths.

6. Solarium dorsuosum. *Sol. testâ conoideâ, lævigatâ, solidâ, fuscâ, albo confusè nebulosâ; anfractibus planulatis, spiraliter seriatim sulcatis, spiræ leviter striatis; ad peripheriam sulcis geminis instructâ; basi sulcatâ, versùs centrum subtuberculatâ; umbilico*

Digitized by Google

patulo, crenis magnis cincto; aread umbilicali unicostatâ; aperturâ subrotundatâ, internè bisulcatâ. Alt. 4, diam. 6½ lin.

Hab. Puerto Galero, island of Mindoro, Philippines; in seven fathoms, sandy mud.

Cab. Cuming.

7. SOLARIUM DEALBATUM. *Sol. testâ conico-trochiformi, albâ; anfractibus planulatis, quadriseriatim granulato-costatis; cingulo ultimo paulò majore, prominulo; umbilico coarctato, crenis parvis instructo; aread umbilicali multicostatâ; aperturâ rotundatâ.* Alt. 7, diam. 6 lin.

Hab. Manila. Cab. Hinds.

This species may be readily distinguished from *S. variegatum* by its uniform colour and by the several ribs which cross the umbilical space, all of which are of equal size; from *S. cylindraceum* by its decided conical shape, and the characters detailed above observable in the inferior girdle.

It is unquestionable that a sound division of the genus may be effected, by taking *S. variegatum* as the type of a new group; and this opinion rests on the conformation of the foot of the animal, decidedly sessile eyes, and very peculiar operculum of this species. But in trying to effect this I have met with the following genera, all of which have been advanced for sections of the genus as left by Lamarck:—*Omalaxis*, Deshayes; *Bifrontia*, Deshayes; *Helicites*, Schlotheim; *Cirrus*, Sowerby; *Euomphalus*, Sowerby; *Schizostoma*, Bronn; *Solariella*, Searles Wood; *Torinia*, Gray; and not having before me the materials for deciding their respective merits, and being averse to treating the difficulty as a gordian knot by the erection of another genus, I am compelled to leave the subject as I found it.

8. SOLARIUM FRAGILE. *Sol. testâ orbiculato-discoided; anfractibus quadriseriatim tuberculato-cingulatis; cingulo supremo et ultimo fusco pictis, medianis margaritaceis; ad peripheriam angulatâ, crenulatâ; basi tumido; umbilico patulo, crenis parvis albis acutis cincto; aread umbilicali lævi; aperturâ triangulari.* Alt. 1, diam. 3 lin.

Hab. North coast of New Guinea; in seven fathoms, sand.

Cab. Belcher.

9. SOLARIUM FULVUM. *Sol. testâ orbiculato-discoided, solidulâ, fulvâ; spirâ retusâ, anfractibus multiseriatim granuloso-cingulatis, medianis minoribus; ad peripheriam obtusâ, carinis duabus, tertiâ minore intermediâ; basi rotundatâ, seriatim granulatâ; umbilico mediocri, crenis concoloribus cincto; aread umbilicali leviter unicostatâ; aperturâ subquadratâ.* Alt. 1½, diam. 3½ lin.

Hab. New Guinea. Cab. Belcher and Hinds.

10. SOLARIUM VIRGATUM. *Sol. testâ orbiculato-discoided, spirâ retusâ; anfractibus quadriseriatim granulatis, cingulo supremo et ultimo rufis, medianis albis; ad peripheriam obtusis, duabus carinis crenulatis; basi rotundatâ, seriatim granulatâ; umbilico mediocri,*

Digitized by Google

crenis albis cincto, cujus cingulo rufo tuberculato; aperturâ angulatâ. Alt. 1, diam. 2 lin.
Hab. New Guinea. Cab. Belcher.

11. SOLARIUM FENESTRATUM. *Sol. testâ orbiculato-discoideâ, spirâ retusâ; anfractibus multiseriatim granulatis, longitrorsum striatis; suturâ canaliculatâ; ad peripheriam rotundatâ, carinis tribus subæqualibus; basi rotundatâ, seriatim granulatâ; umbilico subpatulo, crenis parvis numerosis cincto; aream umbilicali carinis duabus parvis; aperturâ rotundatâ.* Alt. $1\frac{3}{8}$, diam. $3\frac{1}{2}$ lin.
Hab. New Guinea. Cab. Belcher.
As the only specimen obtained was without the animal, deprived of colour, and had evidently been some time lying in the mud, the cancellation is perhaps considerably more distinct than in the recent state. It is one of those which approach very closely to the unarmed species of *Delphinula*.

12. SOLARIUM CÆLATUM. *Sol. testâ parvâ, valdè discoideâ, nitidâ, fuscâ; spirâ nullâ; anfractibus propè suturam uniseriatim tuberculatis, mediò eleganter radiatim plico-striatis; ad peripheriam carinis duabus obtusis tuberculatis; ad basin rotundatâ; aperturâ subrotundâ; umbilico valdè patulo, crenis parvis numerosis armato.* Diam. 2, umbilic. 1 lin.
Hab. Straits of Macassar; in ten fathoms, among coarse sand. Cab. Belcher.

13. SOLARIUM TROCHLEARE. *Sol. testâ orbiculato-conoideâ, depressiusculâ; anfractibus subtumidis, spiræ longitudinaliter plicatis, ultimo lævigato, supernè sulco unico divisis, aream supremâ atro-fusco fasciatâ, infrà maculis quadratis atro-fuscis cinctâ; ad peripheriam carinatâ, maculis albis et atro-fuscis articulatè ornatâ; ad basin paulisper tumidâ; umbilico magno, patulo; crenis subacutis fuscis.* Diam. 29, umbilic. 8 lin.
Hab. Indian Seas. Cab. Cuming and Hinds.
In general appearance it very closely resembles *S. perspectivum*, with which it has no doubt been long associated. In comparing the adult shells of both species, this will be found somewhat smaller, thinner, and more depressed; the whorls are somewhat more tumid, those of the spire obliquely longitudinally folded, but the last and penultimate are smooth, or very nearly so; above they are divided by a single groove, between which and the suture is a continuous dark band, beneath a series of square approximating spots, which towards the spire usually become continuous; the base is also somewhat tumid; the umbilicus is large, expanded, and perspective, and surrounded by chestnut-brown angular crenations; and the aperture is rhomboidal. It is no doubt an Indian species, but the locality is not known.

14. SOLARIUM PURPURATUM. *Sol. testâ conico-orbiculatâ; anfractibus subtumidis, spiræ longitudinaliter obliquè plicatis, supernè sulcis duabus cinctis, maculis rufo-fuscis subgeminis ornatis, aream*

Digitized by Google

mediand pallidè cinered; ad peripheriam carinatá articulatè maculatá; ad basin strigis rufo-fuscis radiatim dispositis; umbilico subpatulo, crenis parvis albidis. Diam. 15, umbilic. 4 lin.

Hab. ——? Cab. Hinds.

The base is distinctively ornamented with reddish-brown rays, and the square spots on the whorls are somewhat twin in their distribution, since they occupy corresponding situations in the two upper narrow areas.

CORBULA, Bruguières.

1. CORBULA CRISPA. *Corb. testá ovatá, solidá, albidá, anticè rotundatá, posticè truncatá, ab umbonibus obtusè carinatá; valvis rotundatis, dextrá eburneá sulcatá, sinistrá ferè lævigatá; umbonibus politis, eburneis.* Long. $4\frac{2}{3}$; lat. $2\frac{1}{2}$; alt. 3 lin.

Hab. Island of Burias, Philippines. Cab. Cuming.

2. CORBULA ADUSTA. *Corb. testá subobliquè trigoná, lævigatá, fuscá, subtumidá, anticè rotundatá, posticè subacuminatá, ab umbonibus angulatá; valvarum marginibus ventralibus acutis, productis; umbonibus erosis.* Long. 6; lat. $2\frac{2}{3}$; alt. 5 lin.

Hab. New Zealand. Cab. Cuming.

3. CORBULA PROCERA. *Corb. testá ovatá, lævigatá, fuscá, anticè rotundatá, posticè elongatá, subnasutá; valvarum marginibus ventralibus acutis, productis; umbonibus erosis.* Long. 7; lat. 3; alt. 5 lin.

Hab. ——? Cab. Cuming.

These two species closely resemble each other, and both are probably estuary shells.

4. CORBULA CARNOSA. *Corb. testá ovatá, solidá, subæquilaterali, pallidá, carnoso-roseo radiatá; valvis ambabus sulcatis, marginibus ventralibus inclausis; anticè rotundatá, posticè subnasutè breviter attenuatá; umbonibus lævigatis, ad angulos albidis.* Long. $4\frac{1}{2}$; lat. 2; alt. 3 lin.

Hab. ——? Cab. Cuming.

"Continuation of Mr. G. B. Sowerby's description of *Scalaria*."

SCALARIA AURITA, Thes. Conch. part 4. pl. 33. f. 62. *Scal. testá elongatá, lævi, umbilicatá; anfractibus rotundatis, contiguis; varicibus lævibus, decumbentibus, subnumerosis, propè suturam subarcuatis, nonnullis crassis, pluribus tenuibus; aperturá magná, auriformi; colore inter varices fulvo, fasciis tribus fuscis.*

In general form resembling *Sc. lineata* of Say, but wanting the keel on the lower whorl, and having a large open umbilicus. In Mr. Cuming's collection; from the coast of Coromandel.

SCALARIA IMMACULATA, Thes. Conch. part 4. pl. 33. f. 58. *Scal. testá pyramidali, acuminatá, transversè minutissimè striatá; anfractibus numerosis, rotundatis, suturá distinctá; varicibus simplicibus, plerumque tenuissimis, nonnullis crassiusculis; aperturá ovali, pos-*

Digitized by Google

ticè acuminatâ, labio interno anticè subincrassato; umbilico mediocri; colore albo.

Very much like *Sc. vestalis* of Hinds, lately described in the 'Zoological Proceedings,' but more elongated, with a larger umbilicus and with the varices near the suture simple, whereas in *Sc. vestalis* they are acuminated.

Collected by Mr. Cuming in sandy mud at eight or ten fathoms, at Catanauan, province of Tayabas, isle of Luzon.

Scalaria Catanauensis, Thes. Conch. part 4. pl. 34. f. 93 & 94. *Scal. testâ pyramidali, acuminatâ, minutissimè striatâ; anfractibus rotundatis, rapidè crescentibus, varicibus plerumque obsoletis, nonnullis rariùs crassis; aperturâ ovali, subauriformi; umbilico parvo; colore validè griseo, in medio anfractuum fasciâ fuscâ, latâ, obscurâ.*

It is much shorter than *Sc. Martinii*, with the thickened costæ still more rare; the aperture is less oval and less auriform. There is a broad band of pale brown in the centre of the whorls.

Brought from Catanauan, isle of Luzon, Philippines, by Mr. Cuming, and found in sandy mud at a depth of eight or ten fathoms.

Scalaria similis, Thes. Conch. part 4. pl. 34. f. 90. *Scal. testâ subovali, spiraliter minutissimè striatâ; anfractibus paucis, varicibus tenuissimis, plerumque numerosis, nonnullis crassiusculis; aperturâ ovali, posticè subangulatâ, labio interno vix incrassato et expanso; umbilico parvo; colore pallidissimè fulvo.*

The whorls are much less prominent, the minute varices more numerous, and the umbilicus considerably smaller than in *Sc. Catanauensis*.

Collected by Mr. Cuming in Puerto Galero, isle of Mindoro, in sandy mud at four or five fathoms.

Scalaria bullata, Thes. Conch. part 4. pl. 34. f. 87. *Scal. testâ ventricosissimâ, brevi, lævi, anfractibus paucis, rapidè crescentibus, varicibus subnumerosis, irregularibus, decumbentibus, plerumque tenuissimis, nonnullis crassioribus, ad suturam paululùm elevatis et reflexis; aperturâ magnâ; umbilico parvo; colore albo.*

We have only one specimen of this extremely ventricose shell, in a very imperfect state, from the island of Capul, Philippines, taken on the coral reefs by Mr. Cuming.

Scalaria friabilis, Thes. Conch. part 4. pl. 33. f. 74. *Scal. testâ pyramidali, acuminatâ, tenui, imperforatâ; varicibus tenuissimis, valdè numerosis, laminatis, extantibus, propè suturam acutè angulatis; aperturâ magnâ, labio interno subincrassato; colore albo.*

A thin pyramidal species, with extremely numerous thin laminar varices, which project in an acute angle close to the suture.

In Mr. Cuming's collection; brought from Swan River by Lieut. Collie, R.N.

Scalaria indistincta, Thes. Conch. part 4. pl. 35. f. 141. *Scal. testâ elongatâ, imperforatâ, minutè spiraliter striatâ; anfractibus*

Digitized by Google

numerosis, gradatim crescentibus, suturâ distinctâ; varicibus numerosis, inæqualibus, rotundatis, decumbentibus, simplicibus; aperturâ parvâ, labio interno anticè subincrassato; colore albo.

In Mr. Cuming's collection; brought from St. Blas, Gulf of California, by the Hon. Mr. Harris.

SCALARIA SUBTILIS, Thes. Conch. part 4. pl. 35. f. 137. *Scal. testâ elongatâ, angustatâ, spiraliter minutè striatâ; anfractibus numerosis, gradatim crescentibus, propè suturam elevatis; varicibus numerosissimis, laminatis, crenulatis, supernè angulatis; aperturâ parvâ; colore inter varices obscurè fusco.*

A small elongated turreted shell, to the beauty of which neither the description nor the figure can do justice: the varices are numerous, laminated, and regularly crenulated.

Collected by Mr. Cuming at the isle of Camiguing, in coarse sand at thirty fathoms; and at the isle of Corregidor, in sandy mud at thirty fathoms.

SCALARIA CONCINNA, Thes. Conch. part 4. pl. 33. p. 63. *Scal. testâ subovali, lævi, imperforatâ, obtusâ; anfractibus subprominentibus; varicibus numerosis, regularibus, obliquè in spiram continuis, subrotundatis; aperturâ ovali, labio interno tenui; colore pallidissimè fulvo.*

The whorls in this species are more prominent, the ribs more numerous, and the inner edge of the aperture thinner than in *Sc. multicostata.*

Found by Mr. Cuming in sandy mud at sixty fathoms, at Loay, isle of Bohol, Philippines.

SCALARIA MULTICOSTATA, Thes. Conch. part 4. pl. 34. f. 96. *Scal. testâ subovali, lævi, imperforatâ, obtusâ; varicibus subnumerosis, regularibus, obliquè in spiram continuis, subrotundatis; aperturâ ovali; labio interno anticè expanso et incrassato; colore pallidissimè fulvo.*

Rather oval and obtuse, with numerous regular, prominent, rounded varices; the anterior part of the inner lip is thickened and spread over the columella.

Brought by Mr. Cuming from Corregidor, Philippines.

SCALARIA CONNEXA, Thes. Conch. part 4. pl. 34. f. 98. *Scal. testâ ovali, subelongatâ, lævi, imperforatâ; suturâ profundâ; varicibus numerosis, laminatis, prominentibus, in spiram obliquè continuis; aperturâ ovali; colore inter varices obscurè fulvo.*

The numerous varices of this small species are laminar, prominent, and continued from whorl to whorl on the spire, as in the *Sc. Clathrus* of Linnæus, from which it differs essentially in not having the spiral rib at the lower part of the last whorl.

Brought from Sual, province of Pangasinan, isle of Luzon, by Mr. Cuming; found in sandy mud at seven fathoms.

SCALARIA PULCHERRIMA, Thes. Conch. part 4. pl. 34. f. 92. *Scal. testâ pyramidali, subventricosâ, spiraliter minutè striatâ, imper-*

Digitized by Google

foratâ; anfractibus rotundatis, suturâ profundâ; varicibus subnumerosis, laminatis, extantibus, prominentibus, supernè in angulum acutum productis; aperturâ ovali, posticè acutangulatâ, anticè subquadratâ, labio interno subexpanso; colore inter varices fusco-purpurascente.

Pyramidal, acute, rather ventricose, spirally striated, with a deep suture and with rather broad laminar varices, which are expanded into an acute angle near the suture.

Found by Mr. Cuming in black sand at a depth of four fathoms, at Dumaguete, isle of Negros.

Scalaria ovalis, Thes. Conch. part 4. pl. 34. f. 104. *Scal. testâ subovali, lævi; anfractibus paucis, ultimâ magnâ; varicibus novem, crassis, rotundatis; aperturâ ovali, margine incrassato, labio interno incrassato, expanso; colore inter varices pallidè cæruleo.*

The whorls of this very small shell are few in number, the last disproportionately large, with about nine very thick rounded varices; the aperture is oval, with a very thick edge, and the inner lip expanded.

Collected by Mr. Cuming in sandy mud at twenty to thirty fathoms, at Cagayan, province of Misamis, island of Mindinao.

Scalaria hexagona, Thes. Conch. part 4. pl. 33. f. 67. *Scal. testâ brevi, lævi, imperforatâ; anfractibus contiguis, varicibus sex, crassis, prominentibus, ad apicem obliquè continuis; aperturâ rotundatâ; colore albo.*

A short, imperforate, white species, with whorls closely united and strong varices, forming about six oblique continuous lines along the spire.

In the cabinet of Mr. Cuming: brought by Col. Moffat from Acapulco; found in the sands.

Scalaria Elenensis, Thes. Conch. part 4. pl. 34. f. 102. *Scal. testâ pyramidali, lævi, imperforatâ; anfractibus contiguis; varicibus sex; ad suturam subplicatis, irregulariter continuis; aperturâ ovali; colore albo.*

Resembling *Sc. unifasciata*, but without any band, and having the varices straighter and not so regularly continuous.

Collected by Mr. Cuming at Punta St. Elena, West Columbia; in sandy mud at six fathoms.

Scalaria obtusa, Thes. Conch. part 4. pl. 33. f. 54. *Scal. testâ ventricosâ, pyramidali, imperforatâ, lævi; anfractibus contiguis; varicibus numerosis, crassis, rotundatis, continuis, supernè subangulatis; aperturâ rotundatâ, anticè subemarginatâ; labio interno spiraliter recurvo; colore albo.*

Rather short and thick, white, with numerous varices, which continue on the spire from whorl to whorl, and are slightly angular above; the inner lip of the aperture is spirally twisted, and forms an undulated notch at its juncture with the outer lip.

Collected by Mr. Cuming at Punta St. Elena, West Columbia; in sandy mud at six fathoms.

Digitized by Google

Scalaria Mindorensis, Thes. Conch. part 4. pl. 34. f. 91. *Scal. testâ pyramidali, lævi, imperforatâ, tenui; anfractibus vix separatis; varicibus numerosis, simplicibus, ad suturam subirregulariter junctis; colore albo.*

A small, white, thin shell, slightly resembling *Sc. obliqua*, but less oblique, and with more numerous and prominent varices; the whorls are contingent.

Found by Mr. Cuming on the sands at Puerto Galero, island of Mindoro.

Scalaria polita, Thes. Conch. part 4. pl. 34. f. 99. *Scal. testâ tenui, elongatâ, lævi, imperforatâ; anfractibus numerosis, vix prominentibus; varicibus subnumerosis, tenuibus, in medio anfractuum obsoletis; colore pallidè griseo.*

The whorls are numerous and not very prominent; the varices appear as if worn away in the middle of the whorls.

Collected by Mr. Cuming at Xipixapi, West Columbia; in sandy mud at ten fathoms.

Scalaria statuminata, Thes. Conch. part 4. pl. 35. f. 127. *Scal. testâ parvâ, crassâ, brevi, lævigatâ, imperforatâ; anfractibus contiguis, vix prominentibus, anticè lined elevatâ cinctis; varicibus quinque, prominentibus, ad apicem continuis; anticè crassis, posticè in angulum elevatum expansis; aperturâ subrotundâ, labio externo anticè tenui; colore inter varices cæruleo.*

A small, short, thick species, with very prominent ribs, which are elevated and expanded into a broad angle at the upper part of the whorls and very thick at the lower; they are united with each other so as to form five oblique prominent ridges up the spire.

Collected by Mr. Cuming at Payti, Peru; in black sand at seven fathoms.

Scalaria bicarinata, Thes. Conch. part 4. pl. 35. f. 113, 114. *Scal. testâ subcylindricâ, elongatâ, imperforatâ, minutè cancellatâ; anfractibus sex, latis, ad laterâ planis, ad suturam crenulatis, ultimo carinis binis in medio cincto; aperturâ ovali, margine crasso, minutè crenulato; colore ferè albo.*

A very curious little shell, with crenulated suture and two prominent keels in the centre of the last whorl; the edge of the aperture is much thickened.

Found by Mr. Cuming in coarse black sand at seven fathoms, at Dumaguete, isle of Negros.

Scalaria fusca, Thes. Conch. part 4. pl. 35. f. 138. *Scal. testâ elongatâ, imperforatâ, spiraliter minutissimè striatâ; anfractibus 12, subprominentibus, ultimo carinâ lineari anticè cinctâ; varicibus tenuissimis, obliquis, ad suturam flexuosis; aperturâ subovali, margine tenui; colore obscurè fulvo, flammulis fuscis obliquis inter varices seriatim picto.*

An elongated species, with a very narrow but distinct keel on the lower part of the last whorl: the varices are very thin, and bent in near the suture. The shell is finely striated and prettily marked

Digitized by Google

with flame-like patches of dark colour between the varices. There are two specimens in Mr. Cuming's collection, which were found on sand at Sierra Leone.

Scalaria acuminata, Thes. Conch. part 4. pl. 35. f. 130. *Scal. testâ elongatâ, imperforatâ, acuminatâ; anfractibus* 15, *vix prominentibus, anticè carinâ tenui cinctis; varicibus creberrimis, numerosis, tenuibus, curvilineatis; aperturâ ovali, margine tenui, labio interno tortuoso; colore pallidè fulvo, fasciis duabus, unâ prope suturam pallidâ, unâ in medio anfractuum latâ, distinctâ.*

Elongated, keeled, with numerous whorls, and very numerous close-set curvilinear varices.

Found by Mr. Cuming in sandy mud at seven fathoms at Malacca.

Mr. Gould laid before the Meeting specimens of three new species of Mammalia, which he described as

Halmaturus Houtmannii. *Hal.* Mas *facie canescenti-cinereâ, fronte rufescente, spatio inter aures auribusque externè nigrescenti-cinereis; lineâ nuchali nigrescenti-fuscâ; dorso saturatè fusco griseo irrorato, colli corporisque lateribus, artubus anticis et posticis rufis, gutture et pectore fulvescenti-albis, abdomine cinereo; caudâ canescente, supernè et ad apicem nigrescente.*

Fœmina *mari assimilis, coloribus pallidioribus. Juniores nigrescenti-cinerei, colore apud dorsum saturatiore.*

Adult Male.—Face dark grizled grey, stained with rufous on the forehead; external surface of the ear and the space between the ears dark blackish grey; sides of the neck, shoulders, fore-arms, flanks and hind-legs rufous, which colour is palest on the flanks; a line of obscure blackish brown passes down the back of the neck, and spreads into the dark grizled brown of the back; throat and chest buffy white; under surface of body grey; tail grizled grey, deepening into black on the upper side and the extremity; the fur is somewhat short, coarse and adpressed; the base bluish grey, succeeded by rufous, then white, and the extreme tip black. Weight 12½ lbs.

Adult Female.—Is similar in colour to the male, but of a more uniform tint, in consequence of the rufous colouring of the shoulders and flanks being paler, and the grizled appearance of the back not so bright. Weight 8 lbs.

The young is dark grizled grey, approaching to black, particularly along the back. Weight 5 lbs.

	Adult Male. Ft.	In.	Female. Ft.	In.
Length from the nose to the tip of the tail	3	6	3	4
—— of tail	1	2¼	1	2
—— of tarsus and toes, including the nail	0	5¾	0	5⅜
—— of arm and hand, including the nails	0	6	0	4
—— of face from the tip of the nose to the base of the ear	0	4¼	0	4
—— of ear	0	2¼	0	2⅛

Digitized by Google

HALMATURUS DAMA. *Hal. vellere fusco, canescente, rubescente ad nucham, ad dorsum imum, et per artus anticos; facie cinereâ rufo lavatâ; fronte spatio inter aures, auribusque externè nigrescenti-cinereis; artubus posticis pallidè fuscis; caudâ canescente, corpore inferiore pallidè cinereo.*

General colour of the fur grizled brown, becoming of a reddish tint on the back of the neck, arms and rump; face grey, washed with rufous on the forehead; outside of the ears and the space between blackish grey; hinder legs light brown; tail grizled grey; under surface of the body pale grey.

	Ft.	In.
Length from the nose to the extremity of the tail....	2	11
——— of tail	1	$2\frac{1}{2}$
——— of tarsus and toes, including the nail	0	$5\frac{3}{4}$
——— of arm and hand, including the nails	0	$4\frac{1}{4}$
——— of face from the tip of the nose to base of ear .	0	4
——— of ear	0	$2\frac{1}{2}$

This animal is closely allied to and is nearly the same size as *H. Thetidis*, but has much larger ears, and the fur much more dense and lengthened; the base of the fur is bluish grey, to which succeeds reddish brown, then silvery white, the extreme tips being black.

The above is the description of a female; the male will doubtless prove to be of larger size.

It is very numerous on the islands of the Houtmann's Abrolhos, and also inhabits Western Australia, where it is called 'Dama' by the aborigines.

LAGORCHESTES HIRSUTUS. *Lag. arenaceo-fulvus, dorso griseo irrorato; spatio circumoculari conspicuè rubescenti-fulvo; auribus mediocribus, externè cinereo-fuscis, intùs pilis albidis obsitis, pedibus flavescenti-fulvis.*

General colour of the fur, particularly on the hind quarters and under surface, rich sandy buff; that of the head and back having a grizled appearance, occasioned by each hair having a mark of greyish white near the tip; the fur, which is exceedingly soft, is blackish brown at the base, then rufous, the whole beset with numerous hairs, which gradually increase in length towards the lower part of the body, where they exceed the general length of the fur by nearly two inches, and being of a rich rufous tint, give the animal a very conspicuous appearance; broad space round the eye reddish buff; ears moderately large, greyish brown externally, and clothed with whitish hairs within; feet nearly uniform yellowish buff.

	Ft.	In.
Length from tip of nose to tip of tail	2	$3\frac{1}{2}$
——— of tail	0	$10\frac{1}{2}$
——— of tarsus and toes, including nail	0	$5\frac{1}{4}$
——— of arm and hand, including nails	0	$2\frac{3}{4}$
——— of face from tip of nose to base of ear	0	$3\frac{3}{8}$
——— of ear	0	$1\frac{3}{4}$

The above is the description of a male, from the York district of Western Australia, where it is called by the aborigines 'Woo-rup.'

Digitized by Google

It is a very beautiful and well-marked species, distinguished from every other member of its genus by the long reddish hairs of the rump. The extreme tip of the tail is white, but whether this character is constant or not is at present unknown.

At the request of the Chairman, Mr. Gould read the following extracts from a letter he had received from Mr. Gilbert, describing the habits, &c. of some Mammalia and Aves of Western Australia:—

"With respect to the Kangaroos, I have heard of the little silver-haired Lagorchestes (*Lagorchestes albipilis*), and have tried hard to procure a specimen; it is a species well known to the natives of Moore's river, by whom it is called 'Nar-nine,' and is only to be found in densely thick scrub on flats, and on the edges of swamps where the small brush Melaleuca grows so thickly that it is almost impossible for a man to force his way through; its runs being under this, the animal escapes even the quick eye of a native. The only possible means of obtaining it is by having a number of natives to clear the spot, and two or three with guns and dogs to watch for it.

"This beautiful little animal makes no nest, but squats precisely like a hare, as I have been assured by Mr. Johnson Drummond. Of the other species with white behind the ears I can learn very little: are you satisfied it is not a variety? I have seen many with white spots about different parts of the head, which is said by all the hunters to be a common occurrence; the only character which appears to me to approach a specific difference is the redness of colouring, which has been often observed by hunters; the woolly nature of the fur is only the winter covering common to all of them.

"The grey kangaroo, *Macropus Ocydromus*, Gould, of which I have a very interesting series, has very thin hair in summer, while in winter the coat is thick and woolly.

"The male is called *Yoon-gur* and the female *Work* by the aborigines. This large kangaroo is tolerably abundant over the whole colony of Western Australia, from King George's Sound, south, to forty miles north of Moore's river, the farthest point I have reached; it does not appear to confine itself to any peculiar description of country, being as often seen in the gum-forests, among hills, as on the open plains and clear grassy hillocks; it is however more numerous in the open parts of the country, where it is not so liable to surprise. In travelling from Guilford to York, from two to four or five may occasionally be met with; but farther in the interior, particularly at Gwangum plains, herds of thirty to fifty may often be met with: further south, beyond Kojenup, they are still more numerous; in fact, I have never seen in any part of Australia so large a herd as the one I met with on the Gordon plains in 1840; at the most moderate calculation there could not have been less than five hundred kangaroos; several of the party, in their astonishment, considered there were even a greater number than I have stated.

"The large full-grown male is termed a Buck or Boomer, and attains a great size, when he becomes a most formidable opponent to the best dogs in the country, few of which will ever run a large

Digitized by Google

Boomer; this may in some degree account for the few instances of very large ones being killed. It is not by their greater speed that they are enabled to escape; on the contrary, their great weight in some measure incapacitates them for running fast, or to any great distance, so that almost any dog may overtake them; instead, therefore, of running away, the Boomer invariably turns round and faces his pursuers, erecting himself to his full height, if possible with his back against a tree, and thus awaits the rush of the dogs, endeavouring to strike them with his powerful hind-toe, or catching them in his fore-arms, and while thus holding them, inflicting dreadful and often fatal wounds with his foot. Old dogs well broken in, and accustomed to hunting the Boomer, will keep him at bay by their barking till the hunter comes up, who is generally furnished with a short heavy stick, and with a blow or two on the head brings the animal down. Even the hunter often runs a hazard, for a Boomer will frequently, on the approach of man, leave the dogs and attack his new opponent most fiercely; and at times it is no easy matter to avoid being severely cut in attempting to kill it. When closely pursued it takes to the water, and as the dogs approach, catches them in its arms and holds them under him till drowned. If the water be too shallow for drowning them, it has been known to catch one dog and place it beneath its feet, while courageously waiting the approach of a second. The swiftest runner is the female of the first year before having young, and of the second year with her first young; at this age her speed is so great that she is termed the 'Flying Doe': if she obtains anything like a fair start, she will give the fleetest dogs a long and severe run, and will frequently succeed in outstripping them; upon finding herself too closely pressed she attempts to evade the dogs by making a sudden leap, almost at a right angle with her course, and the dogs, not unfrequently when very close to her, and at full speed, bound past her to such a distance, that by the time they regain the track the kangaroo has gained so much ground as to get fairly away; but this stratagem often accelerates her death, for in turning off so suddenly the whole weight is thrown upon one limb; the leg is consequently broken, the animal falls, and the next moment becomes an easy prey. Even large bucks are sometimes taken in this way: in their flight and anxiety to escape the dogs, they often run against a stump or a tree with such violence as to be killed on the spot.

"It would scarcely be supposed, from seeing this animal in confinement, where it appears so quiet and harmless, that it can be excited to rage and ferocity; yet such is the case in a state of nature. Upon finding itself without a chance of escape, it summons up all its energies for a last struggle, and would often come off victor if it had dogs alone to contend with: the moment it sees the approach of man, it appears to know instinctively that he is its most formidable opponent; its lips are then curved and contracted; its eyes sparkle with rage, and seem ready to start from their sockets; its ears are in rapid and constant motion, and it utters its peculiar though not loud voice—a sort of smothered grunt, half hiss or hard

Digitized by Google

breathing; its attention is totally withdrawn from the dogs to its new enemy; regardless of their rush, it loses its former advantage; and the dogs having once fairly got hold, the animal is easily brought down.

"If a female with a tolerably large young one in the pouch be pursued, she will often, by a sudden jerk, throw the little creature out: whether this is done for her own protection, or for the purpose of misleading the dogs, has been debated by hunters; I am inclined to think the former is the case, for I have observed that the dogs pass on without noticing the young one, which in general crouches in a tuft of grass, or hides itself among the scrub without attempting to run or make its escape: the mother, if she eludes her pursuers, doubtless returns for her offspring.

"The kangaroos inhabiting the forests are invariably much darker and have a thicker coat than those of the plains; the young are at first of a very light fawn-colour, and get darker until two years old; from this age they again become lighter in colour, and the old males become of a very light grey; the coat, as already mentioned, being in the summer thin and hairy, and in the winter of a more woolly character. It is no unusual occurrence to find them with white marks on the head, particularly a white spot between the eyes or on the forehead; in one instance I observed the whole of the throat, cheeks, and upper part of the head spotted with yellowish white. Albinoes have been frequently met with. The largest and heaviest kangaroo of this species, of which I have any authentic account, was killed at the Murray, and weighed 160 lbs.*"

"*Halmaturus manicatus*:—Brush and Blue Kangaroo of colonists; *Goorh-a*, aborigines of Perth; *Quarra*, aborigines of the interior.

"This is by far the swiftest and most difficult kangaroo to procure with dogs, not only from its fleetness, but also from the zigzag manner of its successive leaps and the thick brush which it inhabits; it is very rarely seen in the open country, dwelling in scrubby districts, and the facility with which it bounds off and rounds the clumps of bushes, enables it to make its escape with comparative ease: during the heat of the day it may be seen under the shade of a tree or thick clump of bushes, and may be often approached within a few yards before it bounds from its cover, thus affording a tolerably easy shot. Weight from 17 to 21 lbs."

"*Anous stolidus*.—The Noddy and its allied species are the most numerous of all the inhabitants of the Houtmann's Abrolhos, breeding in prodigious numbers; the bird lays in November and December, forming a nest of sea-weed about six inches in diameter, and varying in height from four to eight inches, but without anything like regularity of form; the top is nearly flat, there being but a very slight hollow to prevent the egg rolling off; for, like others of the *Sternidæ*, they never lay but a single egg. The nests are so completely plastered with their excrement, that at first sight it appears to be almost the only material; they are either placed on the ground, in a clear open

* The head, feet and fore-arms were exhibited.

Digitized by Google

space, or on the tops of the thick scrub, over the *Sterna fuliginosa*: these two species incubate together in the utmost harmony, the bushes to an immense extent wearing a mottled appearance, from the great mass of birds of both species perched on the top; the male *Sterna fuliginosa* sitting quite close to the nest of the Noddy, while its mate is beneath, performing her arduous duties of incubation. On walking among these birds' nests, I was surprised to observe the extreme tenacity with which they kept their post; in fact they would not remove off the egg or young, but suffered themselves to be fairly trod upon, or taken off by the hand; and so thickly were these nests placed, that it was no easy matter to avoid crushing either birds or eggs at every step. In the middle of January I found the eggs very nearly ready to hatch, and but few young birds; in numerous instances the bird would suffer me to take it by the wing and throw it off the nest, but would immediately return, although I was still standing close to the spot. There would be an overwhelming increase of this species yearly but for one check which nature has provided against it in the presence of a lizard, which is extremely abundant about their breeding-places, and which finds an easy prey in this and *S. fuliginosa*. I am satisfied, from constant observation, that on an average, not more than one out of every twenty birds hatched ever reach maturity, or live long enough to take wing; besides this, great numbers of the old birds are constantly killed: these lizards do not eat the whole bird, but merely extract the brains and vertebral marrow; the remainder however is soon cleared off by the *Dermestes lardarius*, which is here in amazing numbers, and gave me a great deal of uneasiness and constant trouble to preserve my collection from their repeated attacks. I did not observe the Noddy inhabiting any other but South Island; they do not appear to go far out to sea to feed, finding an abundance of food immediately outside the outer reef; nor did I in any one instance observe it feeding in the smooth quiet water between the outer reef and the islands. Their food consists of small fish, small mollusca, medusæ, cuttle-fish, &c. Irides brown, bill and legs blackish grey; flight somewhat heavy and very irregular."

"*Anous* ——? (Lesser Noddy).—This, although an allied species to the Noddy, is totally different in its habits of incubation, and is even much more numerous than the former; it builds a nest of sea-weed on the branches of the mangrove, from four to ten feet above the ground; like the Noddy, however, it is truly gregarious, arranging their nests as closely as possible; the sea-weed is merely thrown across the branch without any regard to form, till they have a heap varying from two to four inches in height, the long pieces of sea-weed in many instances hanging beneath the branch, which makes it appear a much larger structure: their nests and the branches of the trees are completely white from their excrement, throwing out a most disagreeable and sickly odour, which is perceptible at a considerable distance. Although there are large groves of mangroves on other islands, this bird only inhabits those of South Island. I have seen many vast flocks of birds, but I must con-

Digitized by Google

fess I was not at all prepared for the surprise I experienced in witnessing the amazing clouds (literally speaking) which these birds present when congregating in the evening; while they had their young to feed, their departure and return with food during the day in one direction had a most singular appearance. From their breeding-place, across the smooth water to seaward, beyond the outer reef, is a distance of about four miles, and this entire distance, in their one and regular track, wore the appearance of one continuous dark line, from their prodigious numbers: after the young were enabled to accompany the parent birds, I observed they all left the breeding or roosting-place in the morning and did not again return till evening, apparently the first comers waiting the arrival of the last before finally roosting for the night; it is when thus assembling that the amazing number is seen to perfection: even Audubon, who has been so accustomed to see such vast flocks of the passenger pigeon, could hardly avoid expressing surprise if he had an opportunity of seeing these birds at sunset, moving in one immense mass over and around their roosting-place; while the noise of the old birds' quack and the piping whistle of the young ones is almost deafening. This bird, like its congener, lays but a single egg; it commences incubating in December, and appears to be the exclusive inhabitant of the mangroves; and while sitting on its egg or tending its young is as easily caught as the Noddy, suffering itself to be taken off its nest rather than leave it. As an article of food it was the favourite, several hundreds being killed almost daily during our stay on the island. From the circumstance of this bird inhabiting the upper branches may be attributed its numbers being greater than any other of the numerous birds which inhabit the islands, the lizards being unable to climb the branches with the facility necessary for capturing their prey, and it thus escapes their repeated attacks, to which the others must at all times be subject on the ground."

Mr. L. Fraser laid upon the table three new species of Birds, which he described as

LAGOPUS FERRUGINEUS. *Lag. dorso, humeris, et uropygio, nitidè ferrugineis; singulis plumis in medio fusco notatis; capite et collo fuscis; plumarum radicibus albis; primariis cinereis; caudâ supernè cinereâ, ferrugineo marginatâ et ad apicem albâ; femoribus tarsisque ferrugineis nigro atque albo, vix distinctè fasciatis; rostro et unguibus nigris, ceromate et digitis flavis.*

Upper surface dark brown, mottled slightly with white on the head and neck; tail above the basal half white, terminal brown, totally white beneath, the feathers on the breast having brown quills and those on the sides and thighs spotted with brown.

Total length 23½ in.; wings, 17; tail, 10; gape, 1⅞; tarsi, 3.

Hab. Mexico.

Mus. Zool. Soc. Lond.

There are three specimens of this bird in different stages of plumage in the Society's collection, all from Mexico; one was presented by John Taylor, Esq., another by N. A. Vigors, Esq.

Digitized by Google

Psittacus Timneh. *Ps. saturatè cinereus, uropygio, abdomine imo, crisso, et femoribus pallidè cinereis, caudâ saturatè ferrugineo-rubrâ, rectricibus singulis acutis.*

Hab. Timneh country, Sierra Leone.

Le Perroquet cendre noir; Le Vaillant, Hist. Nat. des Perroquets, pl. 102.

Mus. Zool. Soc. Lond.

This bird is confined to that part of Western Africa near Sierra Leone; it is never seen so low down as Cape Coast, which is the locality of the *Psittacus erithacus*, from which it differs in its much darker tints of colouring, and the tail-feathers terminating in a point.

Plyctolophus citrino-cristatus. *Pl. albus, cristâ citrinâ, plumis auricularibus sulphureo leviter tinctis.*

In vivario, Zool. Soc. Lond.

About the size of *Pl. sulphureus*.

A letter from George Roberts, Esq., of Lyme Regis, was communicated by Mr. Yarrell. It announced the appearance of large shoals of Sprats off Lyme Regis, from the 14th to the 20th of December last. So numerous were these shoals, that at the distance of only fifty yards from the shore, at high water, the fishermen dipped the sprats out with their shrimp-nets; and so great was the quantity taken, that the price at one time was as low as 3*d*. per bushel. The oldest fishermen do not remember any such occurrence at Lyme. After a short cessation shoals again made their appearance about the 23rd of January, the fish being even more numerous than before, giving full employment to about seventy-five fishermen.

Many of the sprats were observed to be infested with the long slender parasite figured by Mr. Sowerby in his 'British Miscellany,' plate 68. It is also described by Pennant in the fourth volume of his 'British Zoology,' page 113, edition 1812, under the name of *Lernea sprattæ*. It is the *Lerneonema monillaris* of M. Milne Edwards, 'Hist. Nat. des Crustacés,' tome iii. p. 525, planche 41, fig. 5, and is generally found adhering by its arrow-shaped head to the soft parts about the eye of the fish, or along the line of the abdomen. A specimen and a drawing of the fish and its parasite were exhibited in illustration.

Digitized by Google

March 12, 1844.

William Yarrell, Esq., Vice-President, in the Chair.

Mr. Lovell Reeve described thirty-three new species of *Arca*:—

ARCA PILULA. *Arca testâ orbiculari, valdè gibbosâ, subinæquivalvi, vix inæquilaterali, lateribus supernè angulatis, infrà rotundatis; albidâ, fuscescente pallidè tinctâ, epidermide fuscâ, inter costas setosâ, indutâ; radiatim costatâ, costis quinque vel sex et viginti, angustis, valvæ sinistralis omnibus, valvæ dextralis anticis tantum, subtiliter nodulosis; umbonibus subremotis, ligamenti aream elongato-rhomboideâ.*

Conch. Icon. *Arca*, pl. 2. f. 8.

Hab. Island of Burias, Philippines (found in sandy mud at the depth of six fathoms); Cuming.

This species is so exceedingly gibbous that the shell is as wide as it is high, and it is the same in all stages and varieties of growth.

ARCA ANOMALA. *Arca testâ quadrato-ovatâ, subcompressâ, inæquivalvi, latere antico rotundato, postico subangulato-rotundato; albâ, viridescente pallidè tinctâ, epidermide corneâ inter costas sparsim indutâ; radiatim costatâ, costis octo et viginti, valvæ dextralis lævibus, planulatis, sinistralis convexis, nodulosis; ligamenti aream angustâ.*

Conch. Icon. *Arca*, pl. 2. f. 9.

Hab. ——?

It seems rather anomalous that the ribs in one valve of this shell should be convex and nodulous, whilst in the other they are flat and smooth; but it is an interesting fact that the larger valve of the inequivalve species of *Arca* exhibits a much more elaborate style of sculpture than the smaller. The *Arca pilula* just described shows this remarkable peculiarity very distinctly, but not so prominently as the species under consideration; and it now remains to be determined whether this difference arises from any superiority of organization in the left lobe of the mantle of the animal inhabitant.

ARCA HOLOSERICA. *Arca testâ obliquè quadratâ, æquivalvi, lateribus supernè angulatis, antico infrà rotundato, postico angulato-extenso; albidâ, epidermide holosericâ obtectâ; radiatim costatâ, costis duabus vel tribus et triginta, creberrimis, planulatis, umbones versus minutissimè pertuso-cancellatis; umbonibus subobliquis; ligamenti aream latiusculâ.*

Conch. Icon. *Arca*, pl. 2. f. 11.

Hab. Island of Samar, Philippines (found in coarse sand and gravel at the depth of four fathoms); Cuming.

This is a very fine species, remarkable not only on account of its

Digitized by Google

general form and velvety epidermis, but for the minute cancellated sculpture of the umbones.

ARCA GUBERNACULUM. *Arca testâ subelongato-ovatâ, compressiusculâ, inæquivalvi, lateribus supernè angulatis, latere antico valdè breviore, postico compresso-expanso; viridescente, epidermide inter costas squamosâ indutâ; radiatim costatâ, costis duabus vel tribus et triginta, planulatis, leviter noduloso-serratis; ligamenti aream angustâ.*

Conch. Icon. *Arca*, pl. 3. f. 11.

Hab. Basey, island of Samar, Philippines (found in coarse sand and amongst shells at the depth of four fathoms); Cuming.

This shell may be recognised by the compressly expanded character of the posterior side.

ARCA CORNEA. *Arca testâ subquadratâ, gibbosiusculâ, inæquivalvi, lateribus supernè angulatis, infrà rotundatis, latere antico breviore; albâ, corio tenui, corneo, viridescente, epidermide inter costas squamosâ indutâ; radiatim costatâ, costis ad novem et viginti, valvæ dextralis planis, sinistralis noduloso-crenatis; ligamenti aream mediocri.*

Conch. Icon. *Arca*, pl 3. f. 16.

Hab. Basey, island of Samar, Philippines (found in sandy mud at low water); Cuming.

The horny covering of this species is of an unusually transparent character.

ARCA GIBBOSA. *Arca testâ rotundato-ovatâ, gibbosissimâ, æquivalvi, lateribus subangulatis, infrà rotundatis, latere antico breviore; albidâ, epidermide fuscâ indutâ; radiatim costatâ, costis sex vel septem et viginti, rotundatis, angustis, leviter nodulosis; ligamenti aream mediocri.*

Conch. Icon. *Arca*, pl. 4. f. 20.

Hab. —— ?

This shell is almost as round as the *Arca pilula*, from which it differs however essentially in having the umbones obliquely turned to the anterior, and the ribs rounded.

ARCA MACULOSA. *Arca testâ obliquè ovatâ, æquivalvi, lateribus supernè subattenuato-angulatis, infrà rotundatis, antico brevissimo, postico obliquè extenso; albidâ, fuscescente tinctâ, latere postico maculis perpaucis fuscis ornato, epidermide tenui, corneâ, inter costas setosâ, obtectâ; radiatim costatâ, costis ad sex et triginta, planulatis, confertis, marginibus serratis, posticis leviter nodulosis, anticis prope marginem sulco divisis; umbonibus pallidè rufescentibus; ligamenti aream mediocri, declivi.*

Conch. Icon. *Arca*, pl. 4. f. 24.

Hab. North coast of New Holland.

It is scarcely possible to conceive two species more immediately allied than this and the *Arca scapha*, though perfectly distinguished by the number and arrangement of the ribs, which in the former are

Digitized by Google

divided by a narrow cut rather than a groove; the scattered brown spots, though few in number, are also peculiar to the *Arca maculosa*.

ARCA COMPACTA. *Arca testâ subelongato-quadratâ, inæquivalvi, gibbosâ, lateribus supernè angulatis, antico breviore, postico leviter angulato-extenso; albidâ, epidermide fuscâ partim indutâ; radiatim costatâ, costis tricenis, valvæ dextralis subangustis, planulatis, sinistralis latioribus, rotundatis, interstitiis cancellatis; ligamenti aream subangustâ, declivi.*

Conch. Icon. *Arca*, pl. 5. f. 27.

Hab. —— ?

This is a short compact shell of rather solid growth.

ARCA PERTUSA. *Arca testâ subobliquè quadratâ, vix æquivalvi, lateribus supernè angulatis, infrà rotundatis; albidâ, viridescente tinctâ, epidermide fuscâ sparsim indutâ; radiatim costatâ, costis duabus vel tribus et triginta, confertis, plano-convexis, subtilissimè pertusis; ligamenti aream latiusculâ, umbonibus subcentralibus.*

Conch. Icon. *Arca*, pl. 5. f. 28.

Hab. Mouth of the Gambia, Africa.

The ribs of this shell are very finely pricked or indented, a character which I do not remember to have observed in any other species.

ARCA CISTULA. *Arca testâ subquadratâ, inæquivalvi, lateribus supernè angulatis, antico infrà rotundato, postico quadrato; albâ, epidermide tenui fuscescente, inter costas squamosâ, indutâ; radiatim costatâ, costis angustis, numerosis, septem vel octo et triginta, valvæ sinistralis umbones versus subtilissimè nodulosis; ligamenti aream mediocri; umbonibus subacutis, prope extremitatem anticam dispositis.*

Conch. Icon. *Arca*, pl. 5. f. 29.

Hab. —— ?

An interesting species, remarkable for the neatness and regularity of the ribs, as well as for the very anterior situation of the umbones.

ARCA INFLATA. *Arca testâ obliquè ovatâ, tenui, inflatâ, vix æquivalvi, lateribus supernè leviter angulatis, infrà rotundatis; albidâ, epidermide corneâ fuscâ, inter costas squamosâ, indutâ; radiatim costatâ, costis numerosis, quadragenis, planulatis, lævibus; ligamenti aream subangustâ, declivi; umbonibus tumidis, paululùm approximatis.*

Conch. Icon. *Arca*, pl. 5. f. 30.

Hab. Ilo Ilo, isle of Panay, Philippines (found in soft mud at the depth of six fathoms); Cuming.

This is a light inflated shell of rather large size, at present unique in the collection of Mr. Cuming.

ARCA CYMBÆFORMIS. *Arca testâ elongato-ovatâ, tumidiusculâ, inæquivalvi, posticè attenuatâ; albidâ, epidermide corneâ viridescente, inter costas squamosâ, indutâ; radiatim costatâ, costis duabus et triginta, valvæ sinistralis rotundatis, tuberculato-crenatis, valvæ dextralis planulatis, anticis tantum crenatis; ligamenti aream parvâ, declivi.*

Digitized by Google

Conch. Icon. *Arca*, pl. 5. f. 31.
Hab. ——?
This is a shell of very peculiar growth, inasmuch as the posterior side is smaller and more attenuated than the anterior, a condition reverse to that usually presented.

ARCA JAPONICA. *Arca testâ elongato-ovatâ, tenuiculâ, valdè inæquivalvi, lateribus rotundatis, postico latiore, antico brevissimo; albâ, epidermide corneâ fuscescente, inter costas squamosâ, indutâ; radiatim costatâ, costis quinque et triginta, angustis, lævibus, planulatis, anticis subobsoletè nodulosis; ligamenti areâ angustissimâ.*
Conch. Icon. *Arca*, pl. 5. f. 32.
Hab. Coast of Japan (found in sandy mud); Dr. Siebald.
The lateral extremities of this shell are peculiarly rounded.

ARCA VELLICATA. *Arca testâ trapeziformi, subcompressâ, in medio leviter contractâ, vix æquivalvi, lateribus supernè angulatis, antico infrà rotundato, postico angulato-expanso; albidâ, epidermide, inter costas squamosâ, partim indutâ; radiatim costatâ, costis angustis, numerosissimis, quinquagenis aut pluribus, anticis sulco divisis; ligamenti areâ angustâ; umbonibus latis, peculiariter depresso-vellicatis.*
Conch. Icon. *Arca*, pl. 5. f. 33.
Hab. ——?
This is a very remarkable shell, both on account of the large number of ribs, and of the peculiar compression of the umbones.

ARCA GAMBIENSIS. *Arca testâ elongato-quadratâ, tenuiculâ, valdè compressâ, in medio coarctatâ, æquivalvi, lateribus rotundatis, postico subangulato extenso; albidâ, epidermide tenui olivaceâ, sparsim setigerâ, indutâ; radiatim costatâ, costis duabus vel tribus et viginti, lævigatis, plano-expansis, lirâ exili intercurrente; ligamenti areâ parvâ, angustâ; umbonibus angulato-mucronatis.*
Conch. Icon. *Arca*, pl. 6. f. 36.
Hab. Mouth of the Gambia, Africa (found in sandy mud in deep water).
The ribs of this shell become peculiarly flattened and spread out towards the margin, and there is a fine ridge running down the centre of the intermediate grooves. This is the only species in which I have as yet observed any kind of fine interribbing.

ARCA CUNEATA. *Arca testâ obliquè ovatâ, æquivalvi, marginem versus coarctatâ, lateribus supernè angulatis, infrà obliquè rotundatis; albidâ, radiatim costatâ, costis ad vicenas, rotundatis, irregulariter nodosis; ligamenti areâ latissimâ, declivi; umbonibus parvis, distantibus.*
Conch. Icon. *Arca*, pl. 6. f. 37.
Hab. Zanzibar.
The great width of the ligamentary area, separating the umbones asunder to a considerable extent, imparts a wedge-like form to this shell, by which it may be easily recognised.

Digitized by Google

Arca secticostata. *Arca testâ elongato-ovatâ, gibbosissimâ, tenuiculâ, lateribus supernè angulatis, infrà subobliquè rotundatis; albidâ, fuscescente partim tinctâ; radiatim costatâ, costis numerosis, angustis, ad quadragenas, quamplurimis sulco subprofundo divisis; ligamenti aream elongatâ, latiusculâ; umbonibus tumidis.*

Conch. Icon. *Arca*, pl. 6. f. 38.

Hab. —— ?

This shell is probably one of those that have been confounded with the *Arca antiquata*; it differs in having a much greater number of ribs, and a larger proportion of them more distinctly grooved.

Arca ferruginea. *Arca testâ ovato-oblongâ, æquivalvi, lateribus rotundatis; albidâ, epidermide ferrugineo-fuscâ indutâ; radiatim costatâ, costis ad septem et viginti, angustis, compressis, subtilissimè nodulosis; ligamenti aream subangustâ; umbonibus obliquè incurvis.*

Conch. Icon. *Arca*, pl. 6. f. 39.

Hab. —— ?

The ribs of this species are unusually narrow, and being finely nodulous, present a kind of beaded appearance.

Arca radiata. *Arca testâ ovato-oblongâ, æquivalvi, lateribus rotundatis; albidâ, fuscescente ad umbones tinctâ, epidermide sparsim indutâ; radiatim costatâ, costis ad tricenas, angustissimis, obsoletè nodulosis, interstitiis clathratis; ligamenti aream mediocri.*

Conch. Icon. *Arca*, pl. 6. f. 40.

Hab. —— ?

The ribs are much less prominently developed than in the preceding species; they are also narrower, more numerous, and less strongly noduled.

Arca obliqua. *Arca testâ ovatâ, valdè obliquâ, æquivalvi, lateribus supernè angulatis, infrà rotundatis, antico brevissimo, postico obliquè expanso; albâ, epidermide fuscescente sericâ, inter costas setosâ, indutâ; radiatim costatâ, costis quinque vel sex et triginta, planulatis, confertis, interstitiis subtilissimè striatis, anticis posticisque leviter crenatis, anticis sulco divisis; ligamenti aream subangustâ, declivi; umbonibus approximatis.*

Conch. Icon. *Arca*, pl. 6. f. 41.

Hab. West coast of Africa.

This is a very interesting species, and altogether one of very distinct character.

Arca myristica. *Arca testâ subquadrato-ovatâ, gibbosiusculâ, inæquivalvi, lateribus angulato-rotundatis; albâ, epidermide tenui rubido-fuscescente indutâ; radiatim costatâ, costis tribus vel quatuor et viginti, valvæ sinistralis omnibus nodulosis, dextralis anticis tantum; ligamenti aream subangustâ.*

Conch. Icon. *Arca*, pl. 7. f. 42.

Hab. Jimamailan, island of Negros, Philippines (found in sandy mud at the depth of three fathoms); Cuming.

Digitized by Google

In this species there is no trace of that peculiar green colour which is so prominent in the following.

ARCA CHALCANTHUM. *Arca testâ oblongo-quadratâ, subcompressâ, inæquivalvi, lateribus supernè angulatis, latere antico brevissimo, postico latiore, compressâ; albidâ, corio corneo viridi, epidermide fuscâ, indutâ; radiatim costatâ, costis octo et viginti, angustis, valvæ sinistralis leviter nodulosis; ligamenti areâ subangustâ.*

Conch. Icon. *Arca*, pl. 7. f. 43.

Hab. San Nicolas, island of Zebu, Philippines (found in sandy mud at the depth of six fathoms); Cuming.

The peculiar colour of this shell gives it the appearance of having been stained with green copperas.

ARCA LUZONICA. *Arca testâ elongato-quadratâ, gibbosiusculâ, æquivalvi, lateribus supernè angulatis, infrà rotundatis, latere antico brevi; albidâ, corio corneo viridescente, epidermide fuscâ, indutâ; radiatim costatâ, costis octo et viginti, latiusculis, valvæ sinistralis subobsoletè nodulosis; ligamenti areâ subangustâ, declivi.*

Conch. Icon. *Arca*, pl. 7. f. 44.

Hab. Island of Luzon, Philippines (found in sandy mud at low water); Cuming.

This is a stouter shell than the preceding species; it is more gibbous, and the ribs are broader.

ARCA ROTUNDICOSTATA. *Arca testâ ovatâ, gibbosâ, æquivalvi, lateribus supernè angulatis, antico brevi, rotundato, postico subangulato-extenso; albâ, umbones versus fuscescente tinctâ; radiatim costatâ, costis ad vicenas, subdistantibus, elevatis, rotundatis, crenatis, valvæ sinistralis potiùs latioribus; ligamenti areâ latâ, paululùm concavo-declivi.*

Conch. Icon. *Arca*, pl. 7. f. 46.

Hab. ——?

A species in which the ribs are peculiarly rounded.

ARCA CLATHRATA. *Arca testâ subquadrato-ovatâ, æquivalvi, lateribus leviter compressis, supernè angulatis, infrà rotundatis; albidâ, epidermide tenui fuscescente, inter costas exilissimè setosâ, indutâ; radiatim costatâ, costis leviter crenatis, interstitiis profundis, lineis elevatis clathratis; ligamenti areâ subelongatâ.*

Conch. Icon. *Arca*, pl. 7. f. 48.

Hab. Islands of Burias and Ticao, Philippines (found at the depth of about six fathoms); Cuming.

A small species, in which the interstices between the ribs, which are very deeply engraved, are distinctly latticed with raised lines.

ARCA OVATA. *Arca testâ subelongato-ovatâ, tenui, valdè inæquivalvi, lateribus supernè angulato-rotundatis, postico breviore, subtùs angulato-extenso, antico attenuato-rotundato; albidâ, rufescente-fusco tinctâ, epidermide tenuissimâ; radiatim costatâ, costis ad tricenas, anticis nodulosis, posticis minus distinctioribus, planulatis, lævibus, costis valvæ sinistralis valdè latioribus; ligamenti areâ parvâ, latiusculâ.*

Digitized by Google

Conch. Icon. *Arca*, pl. 8. f. 49.

Hab. St. Elena, South America (found in sandy mud at the depth of from six to eight fathoms); Cuming.

This shell partakes of the characters of the *Arcæ Brasiliana* and *incongrua*; it is however more elongated than either, and the ribs are narrower and more in number.

ARCA CRENATA. *Arca testâ subelongato-quadratâ, subcompressâ, solidiusculâ, vix æquivalvi, lateribus angulato-rotundatis; albidâ, epidermide tenui fuscâ indutâ; radiatim costatâ, costis septem vel octo et triginta, valvarum ambarum omnibus noduloso-crenatis; ligamenti aream subangustâ, declivi, umbonibus depresso-approximatis.*

Conch. Icon. *Arca*, pl. 8. f. 51.

Hab. ——?

This species may be distinguished by its multiplicity of ribs, coupled with the manner in which the whole of them in both valves are crenated.

ARCA GLOBOSA. *Arca testâ globosâ, tumidâ, subæquivalvi, lateribus supernè subangulatis, antico breviore; albidâ, epidermide cornea fuscâ indutâ; radiatim costatâ, costis duabus vel tribus et triginta, lævibus, planulatis; ligamenti area mediocri, umbonibus latiusculis, subapproximatis.*

Conch. Icon. *Arca*, pl. 8. f. 52.

Hab. Catbalonga, island of Samar, Philippines (found in coarse sand and gravel at the depth of four fathoms); Cuming.

Chiefly characterized by its globular form and the smooth horny nature of the epidermis.

ARCA RUFESCENS. *Arca testâ elongato-ovatâ, valdè inæquivalvi, lateribus supernè leviter angulatis, infrà rotundatis, postico subelongato-extenso; albidâ, rufescente tinctâ, epidermide inter costas partim indutâ; radiatim costatâ, costis numerosis, quadragenis, confertis, lævibus; ligamenti area mediocri, umbonibus subtruncatis.*

Conch. Icon. *Arca*, pl. 8. f. 53.

Hab. ——?

This shell is of a more solid structure than the *Arca inæquivalvis*; the ribs are much more numerous and close-set, and independent of the difference of colour, there is a truncated peculiarity in the umbones.

ARCA CONTRARIA. *Arca testâ obliquè ovatâ, solidâ, turgidâ, æquivalvi, lateribus rotundatis, postico brevi, antico elongato-extenso; albidâ, epidermide sericâ fuscâ crassâ partim indutâ; radiatim costatâ, costis tricenis, lævibus; ligamenti area latiusculâ, declivi; umbonibus contrariè contortis.*

Conch. Icon. *Arca*, pl. 8. f. 55.

Hab. ——?

This is another contrary or reversed species, and a very remarkable one, the shell being completely reversed, whilst the position of

Digitized by Google

the ligamentary area remains the same. This and the *Arca reversa*, Gray, are the only species of the genus I have as yet seen exhibiting this peculiarity of growth.

ARCA ANGICOSTATA. *Arca testâ subquadrato-ovatâ, subæquivalvi, lateribus supernè angulatis, infrà rotundatis, antico brevi; albidâ, fuscescente partim tinctâ, epidermide fuscâ, inter costas squamosâ, indutâ; radiatim costatâ, costis ad tricenas, anticis angustis, subdistantibus, leviter crenulatis, posticis latioribus, expansioribus; ligamenti aream latiusculâ.*

Conch. Icon. *Arca*, pl. 9. f. 57.

Hab. —— ?

There is a very unusual disproportion in the width of the ribs of this species, the anterior ribs being exceedingly narrow, whilst the posterior are wider and spread out as it were.

ARCA LORICATA. *Arca testâ subquadratâ, gibbosâ, lateribus supernè attenuato-angulatis, antico brevi, rotundato, postico angulato-extenso; albidâ, corio corneo cæruleo-viridescente loricatâ, epidermide tenui, fuscâ, inter costas squamosâ, indutâ; radiatim costatâ costis septem vel octo et viginti, planiusculis, acutangulis; umbonibus subapproximatis; ligamenti aream leviter declivi.*

Conch. Icon. *Arca*, pl. 9. f. 58.

Hab. —— ?

This shell is covered with a peculiarly strong horny cuticle, and differs from any previously described species in the arrangement and formation of the ribs.

ARCA DISPARILIS. *Arca testâ ovatâ, tenui, subcompressâ, valdè inæquivalvi, lateribus angulato-rotundatis, latere postico subcompresso-expanso; albidâ, corio corneo tenui cæruleo-viridescente, epidermide fuscâ indutâ; radiatim costatâ, costis sex vel septem et triginta, planiusculis, umbones versus obsoletè crenulatis; umbonibus subapproximatis; ligamenti aream angustâ, declivi.*

Conch. Icon. *Arca*, pl. 9. f. 59.

Hab. —— ?

The nearest approach to the *Arca inæquivalvis*, but a shell of more compressed growth; the valves exhibit a still greater disparity of size, and the ribs are rather more numerous.

ARCA CREBRICOSTATA. *Arca testâ elongato-quadratâ, æquivalvi, lateribus supernè angulatis, antico infrà rotundato, postico elongato-extenso, subattenuato; albâ, epidermide fuscâ holosericâ indutâ; radiatim costatâ, costis numerosissimis, tribus vel quatuor et quadraginta, planis, latiusculis, creberrimis, anterioribus sulco divisis, subtilissimè crenulatis; umbonibus latis, subapproximatis; ligamenti aream angustâ, declivi.*

Conch. Icon. *Arca*, pl. 9. f. 61.

Hab. —— ?

The ribs of this species are very characteristic, being comparatively broad, flat, very close-set, and more in number than in any other of the genus.

Digitized by Google

ARCA HIANS. *Arca testâ elongato-ovatâ, æquicalvi, anticè hiante, lateribus rotundatis, postico attenuato-extenso; albidâ, fuscescente pallidè tinctâ, epidermide fuscâ, inter costas squamosâ, indutâ; radiatim costatâ, costis duabus vel tribus et triginta, latiusculis, planulatis, anticis subobsoletè crenulatis, sulco latissimo divisis; umbonibus subapproximatis; ligamenti aream angustâ, profundè declivi.*

Conch. Icon. *Arca*, pl. 9. f. 62.

Hab. ——?

The shape of the *Arca hians* approaches somewhat to that of the *Arca cymbæformis*, but the species differ most essentially from each other on examination. In the *Arca hians* the valves are equal, the anterior ribs are divided by an unusually broad groove, and the shell gapes at the anterior end to the extent of about three-sixteenths of an inch, a peculiarity of which I have not observed the slightest indication in any other species of this division of the *Arcæ*.

ARCA OCCLUSA. *Arca testâ subquadratâ, valdè gibbosâ, inæquivalvi, lateribus supernè attenuato-angulatis; albâ; radiatim costatâ, costis septem vel octo et viginti, subdistantibus, valvæ dextralis lævibus, sinistralis nodulosis; umbonibus prominentibus, peculiariter approximatis; ligamenti aream subdeclivi.*

Conch. Icon. *Arca*, pl. 10. f. 64.

Hab. ——?

The umbones of this shell are so closely approximated over the ligamentary area, as to prevent the valves from opening beyond the extent of about a quarter of an inch.

ARCA AMBIGUA. *Arca testâ subquadratâ, tenuiculâ, inæquivalvi, lateribus subattenuato-angulatis, antico infrà rotundato, postico angulato; albidâ, epidermide fuscâ, inter costas squamosâ, indutâ; radiatim costatâ, costis tribus vel quatuor et triginta, angustis, rotundatis, anticis subtilissimè rotundatis; ligamenti aream subangustâ.*

Conch. Icon. *Arca*, pl. 10. f. 65.

Hab. ——?

The *Arca cistula* is the nearest allied species to this.

ARCA CEPOIDES. *Arca testâ subquadrato-ovatâ, tenui, ventricosâ, inæquivalvi, lateribus angulato-rotundatis; albidâ, fuscescente pallidè tinctâ, corio corneo cærulescente, epidermide fuscâ, inter costas squamosâ, indutâ; radiatim costatâ, costis duabus et triginta, lævibus, planulatis, costis valvæ sinistralis sublatioribus; umbonibus tumidis; ligamenti aream latiusculâ, valdè declivi.*

Conch. Icon. *Arca*, pl. 10. f. 66.

Hab. San Miguel, South America (found in sandy mud); Cuming.

This is a fine bold species, but it does not exhibit any very striking peculiarity of character.

ARCA HANKEYANA. *Arca testâ obliquè ovatâ, crassiusculâ, valdè gibbosâ, tumidâ, æquivalvi, lateribus rotundatis, supernè attenuatis, latere antico brevissimo, postico obliquè extenso; albâ, epidermide*

Digitized by Google

tenui, inter costas hirsutâ, sparsim indutâ; radiatim costatâ, costis duabus vel tribus et triginta, planulatis, confertis, quadriliratis; umbonibus parvis, distantibus; ligamenti aream brevi, latâ, declivi.

Conch. Icon. *Arca*, pl. 10. f. 68.

Hab. Harbour of Mozambique (found in a mass of white coral on the reefs at low water, spring tide); Hankey.

I close this division of the genus with a new species, which exhibits a peculiarity in the structure of the ribs of great novelty and interest, each of them being composed of four distinctly separated ridges.

I have great pleasure in naming this important species after the gentleman to whom I am indebted for it, Lieut. Hankey, R.N., a zealous conchologist, whose researches on the coast of Africa have greatly contributed to science.

The following description of some new species of *Columbella*, in the collection of H. Cuming, Esq., by Mr. G. B. Sowerby, was then read:—

COLUMBELLA DUCLOSIANA, nob., Thes. Conch. part 4. pl. 36. f. 15, 16. *Col. testâ ovatâ, utrinquè acuminatâ, longitudinaliter costellatâ, saturatè fuscâ, zonis binis pallidioribus; spirâ acuminatâ, anfractibus* 5, *costatis, ultimâ magnâ parte ventrali longitudinaliter costatâ, interstitiis costarum transversim striatis, dorsali lævigatâ, anticè transversim striatâ; aperturâ latiusculâ, flexuosâ, nigricante; labio externo crasso, intùs denticulis* 8–9, *posticis majoribus; interno posticè callifero; canali breviter acuminato, subreflexo; epidermide crassiusculâ.*

Epidermis coarse and rough. Found under stones on the coast of Malacca by H. Cuming; also from Java.

COLUMBELLA CHLOROSTOMA, nob., Thes. Conch. pl. 36. f. 17, 18. *Col. testâ ovatâ, longitudinaliter costatâ, lævi, albâ, nigro-maculatâ; spirâ mediocri, anfractibus* 5, *subventricosis, costatis, ultimo anticè transversim striato, parte dorsali anticâ costis obsoletis; aperturâ oblongâ, latiusculâ, peritremate fulvescente; labio externo posticè angulato.*

A single specimen is in the collection of M. Petit de la Saussaye, which he has obligingly communicated. It is not *Buccinum chlorostoma* of Wood.

COLUMBELLA RUDIS, nob., Thes. Conch. pl. 36. f. 33, 34, 35. *Col. testâ oblongâ, rudi, plerumquè albidâ, punctis strigisque irregulariter ornatâ; spirâ longiusculâ, acutiusculâ, anfractibus* 7, *transversim crassè granuloso striatis, posticè anguliferis, ultimo magno; aperturâ subflexuosâ, albâ, peritremate posticè angulifero; canali subreflexâ.*

From Nevis: in Mr. Cuming's and other collections.

COLUMBELLA PŒCILA, nob., Thes. Conch. pl. 37. f. 51, 52. *Col. testâ ovatâ, utrinquè subacuminatâ, transversim striatâ, fulvâ, lineis* 2–3 *transversis castaneis, maculisque albis variegatâ; an-*

Digitized by Google

fractibus 5–6, *posticè subcoronatis, ultimo magno, subtrigonali; aperturâ latiusculâ, flexuosâ, labii externo medio subcoarctato.*

Two specimens only were brought from Matnog by H. Cuming.

COLUMBELLA VENUSTA, nob., Thes. Conch. pl. 37. f. 53, 54. *Col. testâ oblongâ, lævigatâ, pallescente, strigis maculisque castaneis, undatis, punctisve albis ornatâ; spiræ apice nigricante; anfractibus* 6, *ultimo magno, anticè transversim striato; aperturâ latiusculâ, labio externo extùs striato, interno denticulis externis* 8–9, *internis* 2–3; *canali latiusculo.*

A very graceful species, brought lately from the Swan River Settlement.

COLUMBELLA SPLENDIDULA, nob., Thes. Conch. pl. 37. f. 65, 66. *Col. testâ oblongâ, lævi, aurantiacâ, maculis albis castaneisque variegatâ; spirâ breviusculâ, subacuminatâ; anfractibus* 7–8, *brevibus, ultimo magno, anticè transversim striato; aperturâ subflexuosâ, albâ; labio externo extùs varicoso, margine tenuiusculo; labio interno anticè laminâ levatâ columellari instructo; canali brevi, subreflexo.*

Found in coarse sand at a depth of seven fathoms, near the island of Corregidor, bay of Manila, by H. Cuming.

COLUMBELLA OBSCURA, nob., Thes. Conch. pl. 37. f. 70, 71. *Col. testâ oblongâ, lævi, obscurè fulvâ, strigis longitudinalibus nigris; spirâ subacuminatâ, anfractibus* 7, *posticè albo nigroque articulatis, ultimo anticè transversim sulcato; labio interno subincrassato, margine acutiusculo, intùs medianè dentibus* 3–4 *obsoletis; interno anticè laminam levatam columellarem efformante; canali brevi, subreflexo.*

North-west coast of New Holland; Mr. Cuming's collection.

COLUMBELLA CONIFORMIS, nob., Thes. Conch. pl. 37. f. 77, 78. *Col. testâ ovato-turbinatâ, lævi, pallidâ, coloribus variis pictâ; spirâ breviter conicâ, anfractibus* 7, *primis sex medio obtusè angulato, marginibus propè suturam levatiusculis; ultimo anfractu magno, elongato-conico, anticè transversim striato; labio externo tenuiusculo, intùs denticulis plurimis; canali subreflexo.*

In Mr. Cuming's collection.

COLUMBELLA ASPERSA, nob., Thes. Conch. pl. 37. f. 79, 80. *Col. testâ oblongo-ovatâ, lævi, albâ, castaneo-reticulatâ et maculatâ; spirâ subacuminatâ, apice obtuso, anfractibus* 6, *posticè rotundatis, ultimo anticè transversè obsoletè striato; aperturâ latiusculâ, flexuosâ, labio externo intùs medianè tuberculato denticulis obsoletis, margine lævigato; canali latiusculo, brevi.*

Two specimens are in Mr. Cuming's and one in Lady Harvey's collection: locality unknown.

COLUMBELLA LIGULA, Ducl., Thes. Conch. pl. 38. f. 83, 84, 85. *Col. testâ oblongâ, acuminatâ, lævi, albidâ, coloribus variis fasciatim pictâ; spirâ elongatâ, turritâ, anfractibus* 8–9, *subventricosis, nitidis, ultimo magno; labio externo extùs crassiusculo, variciformi,*

Digitized by Google

intùs denticulato; labio interno anticè laminam levatam columellarem efformante, intùs denticulis, rugosiusculo.

Found by Mr. Cuming at Ticao.

COLUMBELLA FABULA, nob., Thes. Conch. pl. 38. f. 86, 87; *C. Sadonosta*, Ducl. *Col. testâ ovatâ, lævi, pallidâ, coloribus obscuris variis pictâ; spirâ acuminatâ, conicâ, apice acuto; anfractibus* 6–7, *margine suturarum levatiusculo; ultimo magno, anticè transversim striato; aperturâ latâ, labio externo tenuiusculo, posticè subemarginato, intùs in mediam subtumido, denticulato; canaliculato.*

A variety has been found under stones in the bay of Muerte, island of Corregidor, by Mr. Cuming.

COLUMBELLA VULPECULA, nob., Thes. Conch. pl. 38. f. 93. *Col. testâ ovatâ, crassâ, lævi, albidâ, ferrugineo-marmoratâ; spirâ subacuminatâ, anfractibus* 6–7, *ultimo magno, leviter transversim striato, anticè striis validioribus; labio externo crasso, extùs transversim striato, intùs in mediam tumido, denticulato; aperturâ flexuosâ; canali lato, brevi.*

COLUMBELLA MISER, nob., Thes. Conch. pl. 38. f. 111. *Col. testâ ovato-oblongâ, albicante vel lutescente; spirâ pyramidali, anfractibus* 6, *convexiusculis, anticè castaneo-maculatis, posticis quinque longitudinaliter costatis, antico costato, sed costis dorsalibus anticè evanidis; aperturâ latiusculâ, subrhomboidali, dentibus internis labii externi paucis, parvulis.*

There is a variety with nearly obsolete ribs. Locality unknown. In Mr. Bean's collection and in my own.

COLUMBELLA DICHROA, nob., Thes. Conch. pl. 40. f. 168, 169. *Col. testâ oblongo-subpyramidali, lævigatâ, albâ, castaneo-sphacelatâ; apice obtuso; anfractibus quinque; aperturâ latâ.*

St. Vincent's; Rev. L. Guilding. In my own collection.

COLUMBELLA GUTTATA, nob., Thes. Conch. pl. 39. f. 124. *Col. testâ oblongâ, lævi, castaneâ, albo-guttatâ, apice obtuso, violaceo; spirâ longiusculâ, anfractibus* 5, *subplanulatis, ultimo magno; aperturâ magnâ, latâ, dentibus internis labii externi irregularibus, labio columellari dente unico postico.*

In Mr. Norris's and Mr. Stainforth's collections.

COLUMBELLA JASPIDEA, nob., Thes. Conch. pl. 39. f. 125. *Col. testâ oblongâ, pyramidali, lævigatâ, albicante, fulvo-marmoratâ, apice acuminato, roseo; anfractibus* 7, *costellatis, tenuissimè decussatim striatis, costellis ultimi anfractûs anticè obsoletis; aperturâ latiusculâ; labio externo extùs incrassato, intùs denticulis nonnullis munito, dente unico anticè propè canalem admoto, labio columellari anticè tubercularum oblongè instructo.*

Found under stones at low water on the island of Ticao, by Mr. Cuming.

COLUMBELLA ACHATINA, nob., Thes. Conch. pl. 39. f. 126. *Col. testâ oblongo-turritâ, lævi, pallidè brunneo-marmoratâ, apice de-*

Digitized by Google

collato; anfractibus 6, *convexiusculis, ultimo majori, anticè sulcato, sulcis paucis, inconspicuis; aperturâ brevi, latiusculâ, intùs violascente, labio externo anticè effuso.*

In Mr. Cuming's collection; from Swan River.

COLUMBELLA IMPOLITA, nob., Thes. Conch. pl. 39. f. 127. *Col. testâ oblongâ, subturritâ, lævi, obscurâ, fulvescente, fasciâ spirali unicâ albidâ; anfractibus* 7, *subplanulatis; aperturâ breviusculâ, sinuosâ, denticulis internis labii externi paucis, prominentibus, labio columellari anticè paululùm levato.*

In Mr. Cuming's collection.

COLUMBELLA RUGULOSA, nob., Thes. Conch. pl. 39. f. 131. *Col. testâ obovatâ, rugulosâ, crassâ, violaceo-nigricante, fasciâ anticâ maculisque parvis albidis ornatâ; anfractibus* 5, *longitudinaliter costatis, tenuiter decussatim striatis, striis unticis fortioribus; aperturâ latiusculâ, dentibus internis labii externi paucis majusculis.*

Gallapagos Islands; H. Cuming.

COLUMBELLA ATRAMENTARIA, nob., Thes. Conch. pl. 40. f. 174. *Col. testâ ovato-acuminatâ, crassâ, medio ventricoso, transversim striatâ, nigrâ; anfractibus* 5–6, *tenuiter longitudinaliter costatis; aperturâ latâ, labio externo incrassato, internè denticulis subinconspicuis.*

Chatham Island, Gallapagos; G. B. Sowerby's collection.

COLUMBELLA TICAONIS, nob., Thes. Conch. pl. 39. f. 142. *Col. testâ oblongâ, utráque acuminatâ, medio turgido, pallescente, castaneo-sphacelatâ; anfractibus* 6, *transversim striatis, suturis levatiusculis; aperturâ oblongâ, labio externo extùs incrassato, margine tenui, denticulis internis paucis, parvulis.*

Found at a depth of seven fathoms in sandy mud, at the island of Ticao, by H. Cuming.

COLUMBELLA DECUSSATA, nob., Thes. Conch. pl. 39. f. 133. *Col. testâ oblongâ, crassâ, albâ, fusco-marmoratâ; anfractibus* 5, *turgidiusculis, decussatim costatâ; aperturâ oblongâ, subsinuosâ, labio externo albo, crasso, posticè extùs obtusè angulato, margine externo crenato.*

Australia; G. Humphrey.

COLUMBELLA BLANDA, Sol., Thes. Conch. pl. 39. f. 145, 146. *Col. testâ ovato-pyramidali, pallidâ, apice acuto; anfractibus* 8, *lævibus, longitudinaliter undulatim fusco-lineatis, lineis propè suturam dorsalem ultimi anfractûs fortioribus; aperturâ latâ, posticè acuminatâ, labio externo tenuiusculo, extùs turgido, intùs denticulis parvis instructo; canali latiusculo.*

Africa; on the shore. Solander.

COLUMBELLA NIVEA, nob., Thes. Conch. pl. 39. f. 151. *Col. testâ ovato-pyramidali, crassiusculâ, lævi, niveâ, apice acuminato; anfractibus* 8, *primis* 6 *lævigatis, penultimo longitudinaliter costellato,*

Digitized by Google

ultimo costato, ad partem dorsalem anticam lævi; aperturâ subangustâ, subsinuosâ, labio externo crasso, intùs subdenticulato, labio columellari anticè levato.

In Mr. Cuming's collection.

COLUMBELLA SUBULATA, nob., Thes. Conch. pl. 40. f. 158, 159. *Col. testâ turrito-pyramidali, lævigatâ, albidâ, epidermide tenui, corneâ, pallescente indutâ; spirâ subulatâ, anfractibus decem, convexiusculis, primis octo lævibus, tribus ultimis posticè transversim striatis, ultimo striato, posticè tumido; aperturâ sinuosâ, albâ, labio externo extùs incrassato, intùs medianè incrassato, denticulato; labio interno incrassato, levato; canali brevi, reflexo.*

In Mr. Norris's collection: locality unknown.

COLUMBELLA PUELLA, nob., Thes. Conch. pl. 40. f. 160, 161. *Col. testâ ovato-pyramidali, spirâ acuminatâ, acutâ, pallidè castaneâ vel brunneâ variegatâ, anfractibus 9, longitudinaliter costellatis, lævibus, ultimo anticè transversim striato; suturâ crenulatâ, albâ; canali distincto, extùs transversim sulcato; aperturâ oblongâ, subrhomboidea, labio columellari uniplicato.*

From Burias; H. Cuming. A variety nearly free from the longitudinal ribs occurs at Catbalonga.

COLUMBELLA SUFFUSA, nob., Thes. Conch. pl. 40. f. 166, 167. *Col. testâ oblongâ, crassiusculâ, albicante, maculis liturisque fuscis ornatâ; spirâ acuminatâ, conoidali; anfractibus 6–7, longitudinaliter costatis, interstitiis costarum tenuiter transversim striatis; aperturâ latiusculâ.*

Pacific Ocean; Cuming.

COLUMBELLA PARVA, nob., Thes. Conch. pl. 40. f. 170. *Col. testâ oblongâ, pallidâ, fasciâ spirali castaneâ unicâ ornatâ, apice acuminato; anfractibus 6, longitudinaliter costatis, decussatim striatis, ultimo anticè propè labium externum variciformatum lævigato, supra canalem transversim striato; aperturâ breviusculâ, subsinuosâ, labio columellari levato.*

Found under stones at Monte Christi, West Columbia; H. Cuming.

COLUMBELLA CATENATA, nob., Thes. Conch. pl. 40. f. 171. *Col. testâ oblongâ, crassâ, pallidâ, undulatim castaneo-marmoratâ, apice acuminato, obtusiusculo; anfractibus 6, longitudinaliter costatis, interstitiis lævibus, ultimo anticè transversim striato; aperturâ latiusculâ, denticulis parvis 4, labii columellaris obtusis.*

Locality unknown; Mr. Cuming's collection.

COLUMBELLA NIGRICANS, nob., Thes. Conch. pl. 40. f. 172. *Col. testâ oblongâ, nigricante, apice acuminato, anfractibus 6, longitudinaliter costatis, interstitiis costarum tenuiter transversim striatis; suturâ distinctâ, crenulatâ, albicante, margine labii externi pallido.*

Gallapagos Islands; Mr. Cuming's collection.

COLUMBELLA DORMITOR, nob., Thes. Conch. pl. 40. f. 173. *Col. testâ ovato-conoideâ, pallescente, spirâ conicâ, breviusculâ; anfrac-*

Digitized by Google

tibus 6, transversim sulcatis; aperturâ lævigatâ, margine interno labii externi crenulato.

St. Vincent's; Rev. L. Guilding. In Mr. Gray's collection.

Columbella Guildingii, nob., Thes. Conch. pl. 40. f. 175, 176. *Col. testâ oblongo-pyramidali, pallescente, brunneo-variegatâ, apice acuminato-subturritâ; anfractibus 6, longitudinaliter costatis et transversim striatis; aperturâ longiusculâ, sinuosâ, canali subelongato, extùs transversim sulcato.*

In the British Museum; found at St. Vincent's by the late Rev. Lansdowne Guilding.

Columbella Brodripii, nob., Thes. Conch. pl. 40. f. 178, 179. *Col. testâ oblongo-turritâ, lævi, castaneâ, variè albo-maculatâ et guttatâ; anfractibus 5, subventricosis, oblongâ, latiusculâ, labio externo intùs denticulis 2–3 obsoletis instructo; anfractu ultimo anticè transversim striato.*

Alboran Island; W. J. Broderip, Esq. In the British Museum.

Columbella Kraussii, nob., Thes. Conch. pl. 40. f. 180, 181. *Col. testâ ovato-oblongâ, lævi, albicante, lineis castaneis undulatis signatâ; anfractibus 5–6, subventricosis, longitudinaliter costellatis, costellis distantibus, interstitiis lævibus; aperturâ latâ; canali brevissimo.*

In the British Museum; found at Natal by Dr. Krauss.

Columbella monilifera, nob., Thes. Conch. pl. 40. f. 177. *Col. testâ turritâ, albâ, maculis irregularibus brunneis pictâ, spirâ acuminatâ; anfractibus 7, longitudinaliter costatis et transversim sulcatis, series tres posticas et seriem unicam costellarum granuliferarum anticam efformantibus; aperturâ brevi, latiusculâ.*

From the West Indies; the late G. Humphrey.

Columbella pusilla, nob., Thes. Conch. pl. 40. f. 182, 183. *Col. testâ ovatâ, lævi, albicante, lineis pallidè brunneis pictâ; spirâ subacuminatâ; anfractibus 5–6, subventricosis; aperturâ latiusculâ, labio externo crassiusculo, intùs obsoletè denticulato; labio interno intùs tuberculo obtuso instructo; canali brevi.*

St. Vincent's; the late Rev. L. Guilding.

Columbella atomella, Ducl., Thes. Conch. pl. 40. f. 184, 185. *Col. testâ oblongâ, albicante, nonnunquàm pallidè castaneo-unifasciatâ, spirâ acuminatâ; anfractibus 6, longitudinaliter costatis; suturâ crenatâ; ultimo anfractu anticè lævi, supra canalem transversim sulcato; aperturâ angustâ.*

West Indies; Rev. L. Guilding.

Digitized by Google

March 26, 1844.

The Right Hon. William Sturges Bourne in the Chair.

A letter was read from Anthony White, Esq., describing the morbid appearances which presented themselves on examining the body of the Lion (*Felis Leo*) which died in the Society's Gardens on the 15th inst.

A communication was made by Dr. Falconer, conveying the substance of a paper by Capt. Cautley and himself on the osteological characters and palæontological history of the *Colossochelys Atlas*, a fossil tortoise of enormous size, from the tertiary strata of the Sewalik hills in the north of India—a tertiary chain apparently formed by the detritus of the Himalaya mountains.

A great number of huge fragments, derived from all parts of the skeleton except the neck and tail, were exhibited on the table, illustrative of a diagram by Mr. Scharf of the animal restored to the natural size.

The communication opened with a reference to the reptilian forms discovered in the fossil slate, among which colossal representatives have been found of all the known tribes, such as the *Iguanodon*, *Megalosaurus*, *Labyrinthodon*, &c., besides numerous forms of which no living analogues exist, such as the *Enaliosaurian* reptiles and *Pterodactyles*. No fossil *Testudinata* remarkable either for size or deviation from existing forms, have hitherto been found in the fossil state. The *Colossochelys* supplies the blank in the first respect, while it differs so little from the land-tortoises in the general construction of its osseous frame, as hardly to constitute more than a subgenus of *Testudo*.

The plastron or sternal portion of the shell affords the chief distinctive character. The episternal portion in the adult is six and a half inches thick, and contracted into a diameter of eight inches, bifid at the apex, and supplied with a thick cuneiform keel on its inferior side: this keel constitutes one of the principal features in the fossil. The entosternal portion exhibits exactly the form of *Testudo*, the same being the case with the xiphiosternal or posterior portion. The plastron in the adult animal was estimated to be nine feet four inches long.

The carapace or buckler of the shell coincides exactly with the general form of the large land-tortoises, of which it exhibits only a magnified representation, flattened at the top and vertical at the sides, with the same outline and recurved margin. The shell was estimated to have been twelve feet three inches long, eight feet in diameter, and six feet high.

Digitized by Google

The extremities were described as constructed exactly as in the land-tortoises, in which the form of the femur and humerus is marked by peculiar characters. These bones in the fossil were of a huge size, corresponding to the dimensions of the shell. The ungueal bones indicated a foot as large as that of the largest Rhinoceros. The humerus was more curved, and the articulating head more globular and deeper in the fossil, from which it was inferred that it had a stronger articulation, greater rotation, and that the *Colossochelys* was enabled to bring its anterior extremities more under its weight than is the case with existing tortoises.

The affinities with *Testudo* shown in the shell and extremities were found to hold equally good in the construction of the head, of which a comparatively small-sized specimen, inferred to have belonged to a young or half-grown *Colossochelys*, was exhibited. The head of the adult to correspond with the dimensions of the shell, and according to the proportions furnished by a large *Testudo Indica*, was deduced to have been two feet long.

There were no ascertained cervical vertebræ to afford direct evidence as to the length of the neck, which was constructed in the diagram relatively to the proportions of *Testudo Indica*. The entire length of the *Colossochelys Atlas* was inferred to have been about eighteen feet, and that it stood upwards of seven feet high.

The generic name given by the discoverers has reference to the colossal size of the fossil (κολοσσὸς et χέλυς), and the specific one to its fitting representation of the mythological tortoise that sustained the world, according to the systems of Indian cosmogony.

The anatomical details occupied so much of the evening, that space was not left for Dr. Falconer to enter on general points connected with the fossil, such as its possible connexion with the mythological fables of the Hindoos and the æra of its extinction, which will form the subject of another communication.

The results of a chemical analysis of the bones by Mr. Middleton were communicated, showing that they contained a very large quantity of fluorine. Some rough sketches of the *Colossochelys* were exhibited, etched on glass by means of the fluorine yielded by its own bones. The analysis indicated the presence of 11 per cent. of fluoride of calcium.

Mr. Gould exhibited a series of Birds from Australia, collected partly by himself and partly by Mr. Gilbert, viz.:—

Fam. Columbidæ.

Geopelia placida. *Geop. facie et gutture cinereis; occipite, dorso alisque e cinereo-fuscis; singulis plumis ad apicem nigerrimo fasciatis, alulis spuriis primariisque saturatè fuscis, humeris subtùs castaneis, pectore, lateribus, et nuchâ cinereis lineis angustis nigris crebrè fasciatis, et lateribus vinaceis.*

Face and throat grey; occiput, back and wings ashy brown; each feather with a band of deep velvety black at the extremity; spurious wings and primaries dark brown; under surface of the shoulders

Digitized by Google

chestnut; chest, sides and back of the neck grey, crossed by numerous narrow bands of black; abdomen and flanks vinous; four centre tail-feathers ashy brown, the remainder black, largely tipped with white; irides light ash-grey; bill and orbits bright greyish blue, becoming much paler before and behind the eye; frontal scales of tarsi and feet dark greenish grey; remainder of the legs and feet reddish flesh-colour.

Total length, $7\frac{3}{8}$ inches; bill, $\frac{5}{8}$; wing, $3\frac{7}{8}$; tail, $3\frac{1}{8}$; tarsi, $\frac{7}{8}$.

Hab. Port Essington.

This and the next species are very nearly allied, but on comparison of numerous individuals I find that size invariably points out the locality from which they have been procured; the larger birds (*G. tranquilla*) being an inhabitant of the interior of New South Wales, and the smaller (*G. placida*) of the north coast; besides which, the bands crossing the chest are broader and more distinct in the latter than in the former.

GEOPELIA TRANQUILLA. *Geop. facie et gutture pallidè cinereis, occipite dorso alisque e cinereo-fuscis, singulis plumis ad apicem angustè nigerrimo fasciatis; alulis spuriis, primariisque saturatè fuscis, pectore, lateribus, et nuchâ pallidè cinereis, lineis angustis nigris crebrè notatis, abdomine et lateribus pallidè vinaceis, abdomine medio crissoque albis; humeris subtùs castaneis.*

Face and throat pale grey; occiput, back and wings ashy brown, each feather bounded at the end with a narrow band of deep velvety black; spurious wing and primaries dark brown; chest, sides and back of the neck pale grey, crossed by numerous narrow, irregular bands of black; abdomen and flanks pale vinous; centre of the abdomen and under tail-coverts white; under surface of the shoulder deep chestnut; four centre tail-feathers greyish brown, passing into black at the tip; the lateral tail-feathers black, largely tipped with white; irides transparent bluish white; base of bill and nostrils light blue; tip of the bill bluish black; naked skin of the orbits deeply wrinkled and of a beautiful light greenish blue; frontal scales of the tarsi and toes dark purple; hind part of the legs flesh-colour.

Total length, $8\frac{3}{4}$ inches; bill, $\frac{5}{8}$; wing, 4; tail, $4\frac{3}{4}$; tarsi, $\frac{7}{8}$.

Hab. Liverpool plains and banks of the Namoi, interior of New South Wales.

Family RALLIDÆ.

Genus EULABEORNIS.

Gen. char.—*Rostrum* capite longius, ferè rectum, et leviter incurvum, lateraliter compressum; naribus elongatis, apertis, singulis in sinu per mandibulæ tres ferè partes a basi excurrente positis. *Alæ* paulò breves atque debiles, valdè rotundatæ; tertiariis elongatis, ferè ad apicem alæ. *Tarsi* paulò longi, et robustiores quàm in genere 'Rallus;' digitis attamen brevioribus. *Cauda* longa, cuneiformis, pogoniis laxis et effusis.

EULABEORNIS CASTANEOVENTRIS. *Eul. capite et collo cinereis;*

Digitized by Google

corpore superiore in toto olivaceo; pectore et corpore inferiore e cinereo-castaneis.

Head and neck ash-grey; all the upper surface, wings and tail olive; breast and all the under surface greyish chestnut; bill yellow at the base, horn-colour at the tip; legs and feet brown.

Total length, 19 inches; bill, $2\frac{1}{4}$; wing, $9\frac{1}{2}$; tail, 6; tarsi, $2\frac{1}{4}$.

Hab. North coast of Australia.

The "*Morduggera*" of the aborigines at Port Essington.

Family Procellaridæ.

Puffinus carneipes. *Puff. castaneo-niger; rostro e carneo albo, culmine apiceque fuscis; pedibus flavescenti-carneis.*

All the plumage chocolate-black; bill fleshy white; culmen and tips of the mandibles brown; legs, feet and membranes yellowish flesh-colour.

Total length, 15 inches; bill, $1\frac{3}{4}$; wing, 12; tail, 5; tarsi, 2; middle toe and nail, $2\frac{1}{2}$.

Procellaria Solandri. *Proc. capite, nuchâ, humeris, primariis et caudâ saturatè fuscis; dorso, alarum caudæque tectricibus e plumbeo-cinereis, plumis fusco marginatis; facie, corporeque subtùs fuscis, abdomine cinereo lavato.*

Head, back of the neck, shoulders, primaries and tail dark brown; back, wing-coverts and upper tail-coverts slate-grey, each feather margined with dark brown; face and all the under surface brown, washed with grey on the abdomen; bill, tarsi and membranes black.

Total length, 16 inches; bill, $1\frac{3}{4}$; wing, 12; tail, $5\frac{1}{2}$; tarsi, $\frac{3}{4}$; middle toe and nail, $2\frac{3}{8}$.

Procellaria leucoptera. *Proc. vertice, corpore superiore, alisque e plumbeo nigris; caudâ e plumbeo-cinereâ; facie, gutture, corpore inferiore, rectricum pogoniis internis ad basim, lineâque humerali albis; tarsis, et membranis interdigitalibus per dimidium basale e carneo-albis.*

Crown of the head, all the upper surface and wings dark slaty black; tail slate-grey; greater wing-coverts slightly fringed with white; face, throat, all the under surface, the base of the inner webs of the primaries and secondaries, and a line along the inner edge of the shoulder, pure white; bill black; tarsi and basal half of the interdigital membrane fleshy white; remainder of the toes and interdigital membrane black.

Total length, 13 inches; bill, 1; wing, $8\frac{1}{2}$; tail, 4; tarsi, $1\frac{1}{8}$; middle toe and nail, $1\frac{3}{8}$.

Aptenodytes undina. *Apt. corpore superiore, lateribus, alisque supernè nitidè cærulescentibus, per plumas singulas lineâ nigrâ longitudinali (latiore in plumis dorsalibus); corpore inferiore alisque subtùs et ad marginem, rectricumque pogoniis internis albis.*

The whole of the upper surface, flanks and upper surface of the wings glossy light blue, with a narrow stripe of black down the centre of each feather, the black mark being broadest and most con-

Digitized by Google

spicuous on the back; all the under surface of the body, under side, and the inner margin of the upper side of the wing and inner webs of the tail-feathers silky white; bill reddish brown beneath, black above; feet yellowish white.

Total length, 13½ inches; bill, 1¼; tarsi, ¾.

Hab. Van Diemen's Land.

This is less than *Ap. minor*, to which it is nearly allied.

For the fine specimen here described I am indebted to Ronald C. Gunn, Esq., who procured it at Circular Head, Van Diemen's Land.

Digitized by Google

April 9, 1844.

William Yarrell, Esq., Vice-President, in the Chair.

A paper by Mr. Sylvanus Hanley was read, containing the following descriptions of new species of the genus *Tellina*, chiefly collected by H. Cuming, Esq. in the Philippine Islands and Central America:—

Tellina Cumingii*. *Tel. testâ elongato-oblongâ, subæquilaterali, solidâ, compressiusculâ, vix nitidâ, albidâ aut flavescente, maculis aut strigis lineisve brunneis aut fusco-purpurascentibus radiatâ, concentricè sulcatâ; sulcis anticè confertis, subimbricatis, posticè sublamellosis remotiusculis; margine ventrali convexo, utrinque sursùm acclinante; dorsali utrinque subdeclivi, anticè convexiusculo, posticè subrecto, subincurvato, subdentato; latere postico attenuato, rostrato, paululùm breviore, ad extremitatem biangulato; costâ umbonali valdè prominente; ligamento inconspicuo; superficie internâ albidâ aut flavidâ; dentibus lateralibus validis, subæquidistantibus.* Long. 0·95; lat. 2·40 poll.

Hab. Guacomayo, Central America; in coral sand.

Intermediate between *Spengleri* and *Mexicana*.

Tellina Rastellum. *Tel. testâ elongatâ, convexiusculâ, æquilaterali, solidâ, flavidâ, pallidè roseo radiatâ, anticè sulcatâ, posticè squamosâ; squamis erectis, lamellosis, in iisdem seriebus cum sulcis concentricis, ordinatis; margine ventrali vix convexiusculo; dorsali utrinque paululùm declivi, anticè vix convexiusculo, posticè recto aut subincurvato; latere postico attenuato, subrostrato, ad extremitatem obliquè biangulato; extremitate anticâ rotundatâ; ligamento, et costâ umbonali, conspicuis; superficie internâ albidâ, umbones versùs aurantio utrinque fucatâ; dentibus lateralibus validis, subæquidistantibus.* Long. 1·61; lat. 3·61 poll.

Hab. Zanzibar. Mus. Cuming, Stainforth, &c.

A species frequently confused with *pulcherrima*, but much more elongated, the sulci stronger, and the scales entirely absent from the anterior side.

Tellina asperrima. *Tel. testâ oblongo-ellipticâ, convexiusculâ, solidiusculâ, flavidâ aut incarnatâ, roseo-radiatâ, totâ superficie externâ, squamis asperrimâ; squamis anticè semilunatis, posticè (et præsertim supra costam umbonalem distinctam) spinosis; margine ventrali medio subrecto flexurâ distinctâ; dorsali utrinque subde-*

* In my former papers I have used the terms posterior and anterior in the Lamarckian sense of the words; but as I find this is contrary to the practice of the other writers in these Proceedings, for the sake of uniformity I now conform to *their* phraseology.

Digitized by Google

clivi et paululùm convexiusculo; latere antico breviore; extremitate posticâ subbiangulatâ, attenuatâ; dentibus lateralibus magnis, antico approximato. Long. 1·0; lat. 1·85 poll.

An unique specimen, in the cabinet of Mr. Cuming; found by him at Sual, province of Pangasinan, isle of Luzon (sandy mud, six fathoms). Allied to *pulcherrima.*

TELLINA JUBAR. *Tel. testâ* T. virgatæ *affinis, sed magis triangulari, altiore, minus elongatâ; rubro-purpureâ, radiis albis aut albidis ornatâ; margine ventrali subarcuato; dorsali utrinque decliviore; superficie internâ albidâ, aut coloribus externis fucatâ.* Long. 1·65; lat. 2·50 poll.

Hab. ——? Mus. Cuming, Sowerby, &c.

TELLINA VERRUCOSA. *Tel. testâ oblongo-elongatâ, solidâ, compressâ; aut flavidâ, rubro-purpureo radiatâ, aut pallidè rosea, radiis subalbidis angustis, zonisque saturatioribus, ornatâ; valvulâ alterâ, undique (natibus excipiendis) verrucosâ; alterâ, mediò concentricè sulcatâ, lateribus solùm verrucosâ; verrucis ellipticis, aut semilunatis, in seriebus vix interruptis, concentricè ordinatis; margine ventrali anticè subarcuato, posticè sursùm acclinante; dorsali anticè convexiusculo et vix subdeclivi, posticè subrecto, subdeclivi; latere antico longiore, rotundato; extremitate posticâ attenuatâ, subrostratâ, obliquè subbiangulatâ; ligamento haud prominente; flexurâ ventrali costâque umbonali, conspicuis; dentibus lateralibus magnis, æquidistantibus.* Long. 0·75; lat. 1·50 poll.

Hab. Corregidor, bay of Manila.

General shape of *T. crucigera,* but in sculpture quite distinct.

Two specimens only of this rare Tellen are as yet known, and both of them in the cabinet of H. Cuming, Esq.

TELLINA GUILDINGII. *Tel. testâ oblongâ, tenui, compressâ, subæquilaterali, albidâ, radiis aurantio-roseis, zonisque albido-roseis, ornatâ; sulcis exilibus, confertis, concentricè exaratâ; margine ventrali subrecto, mediò subretuso; dorsali utrinque declivi, et vix convexiusculo; latere postico paululùm breviore, attenuato; extremitate posticâ infernè angulatâ, anticâ rotundatâ; natibus acutis; costâ umbonali et flexurâ ventrali inconspicuis; ligamento prominente; dentibus lateralibus magnis, æquidistantibus.* Long. 0·70; lat. 1·30 poll.

Hab. West Indies. Mus. Metcalfe, Walton.

Possesses the general appearance of a *Psammobia,* and belongs to that section of *Tellinæ* of which *virgata* is the type.

TELLINA RUBESCENS. *Tel. testâ* T. striatæ *et* T. puniceæ *simillimâ; ab hâc autem differt, testâ tenuiore anticæ emarginationis experte; ab illâ, natibus obtusioribus, et extremitate posticâ minus attenuatâ; ab utroque, superficie nitidissimâ, ligamento infosso, margineque ventrali convexiore et utrinque subæqualiter declivi; sulcis in utrâque valvulâ posticè obsoletis; dentibus ut in* T. puniceâ, *sed minimis, inconspicuis.* Long. 1·25; lat. 1·75.

Hab. Panama and Tumbez; in sandy mud.

Digitized by Google

TELLINA REGIA. *Tel. testâ oblongâ, tenui, compressiusculâ, subinæquivalvi, subæquilaterali, nitidissimâ, pellucidâ, intus extusque roseo-purpurascente, concentricè sulcatâ; sulcis remotis, alterâ in valvulâ posticè evanescentibus; margine ventrali subrecto, mediò subretuso; dorsali utrinque subæqualiter declivi, posticè subrecto; latere antico paululùm breviore, ad extremitatem obtusè rotundato; extremitate posticâ supernè angulatâ, attenuatâ; costâ umbonali et flexurâ ventrali obsoletis; ligamento prominulo; dentibus ut in* T. puniceâ. Long. 1·0; lat. 1·80 poll.

Hab. Real Llejos, Central America; in coarse sandy mud, seven fathoms.

This species forms one of that group of which *punicea* is the type. Though closely allied to that species, its transparency, the more distant sulci, and its deep purplish-red colouring suffice to distinguish it.

TELLINA EBURNEA. *Tel. testâ oblongâ, opacâ, solidâ, inæquivalvi, convexâ, nitidâ, albidâ, inæquilaterali, concentricè sulcatâ; sulcis profundis, remotis (alterâ in valvulâ, nonnunquam posticè evanescentibus); margine ventrali convexiusculo, anticè sursùm acclinante; dorsali anticè subrecto, leviterque declivi, posticè recto subitòque declivi; latere postico multùm breviore, subcuneiformi; lineis erectis obliquis, aream nymphalem et analem rugantibus; ligamento brevi, prominente; flexurâ ventrali costâque umbonali subobsoletis; superficie internâ candidâ; dentibus lateralibus, ut in* T. puniceâ. Long. 0·90; lat. 1·50 poll.

Hab. Tumbez, Peru; in soft sandy mud, five fathoms.

Allied to *punicea*, but easily distinguished from that and any other allied species by the peculiar elevated sulci on the dorsal areas.

TELLINA PRORA. *Tel. testâ subtrigonâ, ovali, solidâ, convexiusculâ, subæquilaterali, nitidâ, extus intusque pallidè roseâ, aut sublævigatâ, aut concentricè et tenuissimè striatâ; margine ventrali convexo; dorsali utrinque valdè et subæqualiter declivi, subrecto; extremitate posticâ acuminatâ; flexurâ ventrali costâque umbonali subobsoletis; ligamento prominulo; dentibus lateralibus magnis, antico approximato.* Long. 1·20; lat. 1·80 poll.

Hab. Porto St. Elena, West Columbia; sandy mud, six fathoms; and Salango, West Columbia, sandy mud, nine fathoms.

Its extremely delicate concentric striæ and acuminated extremity separate it from most of the allied species. It belongs to that group which contains *punicea*.

TELLINA LACERIDENS. *Tel. testâ oblongo-subtrigonâ, solidâ, opacâ, subæquilaterali, nitidissimâ, convexiusculâ, albâ (intus candidâ), supernè lævigatâ, infernè concentricè et confertim striatâ; margine ventrali convexiusculo; dorsali utrinque convexiusculo, et subæqualiter declivi; extremitate anticâ rotundatâ (plerumque subattenuatâ), posticâ rotundato-acuminatâ; costâ umbonali et flexurâ ventrali inconspicuis; ligamento magno, elongato, prominente; dentibus primariis laceratis, antico laterali subapproximato, postico laterali, minore, remoto.* Long. 1·50; lat. 2·50 poll.

Digitized by Google

Hab. Tumbez, Peru; soft sandy mud, five fathoms.

Var. *Testâ magis trigonâ, sulcis confertis, undiquè exaratâ.* Long. 1·20; lat. 1·80 poll.

Hab. Chiriqui, West Columbia; sandy mud, three fathoms.

The ragged primary teeth, the large and elongated ligament, and the either smooth or *closely* sulcated surface, distinguish it from any of the allied species.

TELLINA PRINCEPS. *Tel. testâ oblongo-ellipticâ, æquilaterali, solidâ, compressâ, nitidiusculâ, intus extusque roseo-purpurascente, concentricè sulcatâ; striis exilibus, profundis, radiantibus, sulcos confertos utrinque (et alterâ in valvulâ undique) decussantibus; margine ventrali subrecto, dorsali utrinque leviter et æqualiter subdeclivi; extremitate posticâ, obtusissimè angulatâ; flexurâ ventrali costâque umbonali obsoletis; ligamento prominente; dente laterali antico approximato, postico parvo, remoto, inconspicuo.* Long. 2; lat. 3·50 poll.

Hab. Tumbez, Peru; soft sandy mud, five fathoms.

Although not easily confused with any of that section (with two lateral teeth) to which it belongs, it closely resembles *Tellinides purpurascens.*

TELLINA SOWERBII. *Tel. testâ subellipticâ, subinæquivalvi, tenui, compressâ, lævigatâ, politâ, candidâ; margine ventrali arcuato, posticè sursùm acclinante; dorsali anticè vix paululùm declivi, convexiusculo, posticè paululùm declivi, propè nates subincurvato, deindè convexo; latere antico longiore, subproducto, postico rotundato-acuminato; ligamento parvo, angustissimo, infosso; flexurâ ventrali costâque umbonali subinconspicuis; superficie internâ albidâ, plerumque aurantio tinctâ; dentibus lateralibus tenuibus, subæquidistantibus.* Long. 2; lat. 3·30.

Hab. ——? Mus. Sowerby, Hanley.

Bears a slight resemblance to the *acuta* of Wood.

TELLINA PUDICA. *Tel. testâ parvâ, solidâ, ovato-subtrigonâ, subæquilaterali, nitidâ, candidâ, sublævigatâ, tenuissimè concentricè striatâ; margine ventrali anticè arcuato, posticè subitò sursùm acclinante; dorsali utrinque valdè declivi, anticè convexo, posticè elongato, subrecto; latere antico paululùm breviore, subventricoso, rotundato; postico compresso, rostrato; extremitate posticâ subacuminatâ; natibus prominentibus; flexurâ ventrali costâque umbonali subinconspicuis; ligamento minimo, infosso; superficie internâ politâ; dentibus lateralibus distinctis, subapproximatis, subæquidistantibus.* Long. 0·30; lat. 0·40 poll.

Hab. Catbalonga, isle of Samar; ten fathoms, soft mud.

A stout little shell, possessing the general contour of a *Neæra*, and not easily to be confused with any species of this genus.

TELLINA NUX. *Tel. testâ obovali, subinæquivalvi, subæquilaterali, tenui, convexâ aut subventricosâ, nitidâ, sublævigatâ aut infernè concentricè substriatâ, intus extusque albidâ, umbonibus hyalinis et fulvis; margine ventrali subarcuato, dorsali utrinque convexo, satis*

Digitized by Google

et æqualiter declivi; extremitate posticâ obtusâ, attenuatâ; ligamento angustissimo, infosso; natibus obtusis; flexurâ distinctâ; costâ umbonali inconspicuâ; dentibus lateralibus distinctis, antico paululùm propinquiore. Long. 0·50; lat. 0·75 poll.

Hab. St. Nicholas, Zebu; sandy mud, four fathoms.

More oval than the three succeeding closely allied species.

Tellina pinguis. *Tel. testâ parvâ, rotundato-ovali, tenui, subinæquivalvi, subæquilaterali, nitidâ, convexâ aut subventricosâ, intus extusque albidâ (rarius incarnatâ), lævigatâ (nonnunquam concentricè substriatâ); margine ventrali arcuato, dorsali utrinque convexo et subæqualiter declivi; extremitate posticâ obtusâ; flexurâ distinctâ; natibus minimis; costâ umbonali ferè obsoletâ; ligamento angustissimo, infosso; dentibus ut in* T. nuce. Long. 0·50; lat. 0·60 poll.

Hab. St. Nicholas, Zebu.

By its more orbicular outline it may be distinguished from *nux* and *casta*. It is still more closely allied to *robusta*, but its tenuity, more obtuse hinder extremity, and the greater convexity and less sudden slope of the dorsal edges, suffice for its separation.

Tellina robusta. *Tel. testâ parvâ, rotundato-subtrigonâ, solidâ, subinæquivalvi, subæquilaterali, ventricosâ, nitidâ, aut albo-flavescente, aut pallidè rosaceâ, sublævigatâ (plerumque inferius remotè substriatâ); margine ventrali valdè arcuato, dorsali utrinque subrecto et valdè declivi; latere postico attenuato, ferè subrostrato, ad extremitatem acuminato; ligamento angustissimo, infosso; natibus distinctis, prominentibus, et rectè incurvatis; umbonibus tumidis; flexurâ distinctâ; costâ umbonali ferè obsoletâ; lunulâ parvâ; superficie internâ, plerumque sub umbonibus, flavidâ aut roseâ; dentibus ut in* T. nuce. Long. 0·70; lat. 0·80 poll.

Hab. Isle of Annaa, South Seas, and isle of Burias, Philippines; sandy mud, low water.

Is closely allied to *nux*, *pinguis* and *casta*, but of a stouter texture even in the youngest individuals. The ligamental edge being nearly straight, easily separates it from *pinguis*, where it is decidedly convex.

Tellina casta. *Tel. testâ obovali, tenuissimâ, subinæquivalvi, subæquilaterali, pellucidâ, convexâ, nitidâ, extus intusque candidâ, lævigatâ; margine ventrali maximè arcuato; dorsali utrinque subrecto, subæqualiter satisque declivi; extremitate posticâ angustâ, biangulatâ; ligamento angustissimo, subinfosso; natibus acutis; flexurâ ventrali costâque umbonali distinctis; dentibus ut in* T. nuce. Long. 0·36; lat. 0·48 poll.

Hab. Singapore; sandy mud.

Bears some resemblance to *T. nux*, but the shape is less broad, the ventral edge decidedly arcuated, the dorsal edges less convex and shorter, and the umbones colourless.

Tellina Discus. *Tel. testâ* T. Remiei *simillimâ, sed subobliquâ et sulcis concentricis valdè irregularibus, vixque continuis; natibus*

Digitized by Google

haud rectè incurvatis; margine postico dorsali elevatiore, antico dorsali, prope nates prominulas subincurvato; umbonibus lævigatis; extremitate posticâ angulatâ. Long. 2·75; lat. 3 poll.

Hab. Isle of Mindanao; on reefs, in coarse sand.

TELLINA CYRENOIDEA. *Tel. testâ suborbiculari, solidiusculâ, inæquivalvi, valdè inæquilaterali, subventricosâ, sordidè albâ (intus, sub umbonibus, purpureâ), concentricè costellatâ; striis minutis obliquè radiantibus, costellas confertas posticè decussantibus; margine ventrali arcuato; dorsali utrinque valdè et subrectè declivi, anticè brevi, posticè longiore; latere antico breviore, obtusè rotundato; extremitate posticâ obtusâ, paululùm attenuatâ; natibus prominentibus; lunulâ distinctâ; ligamento infosso; flexurâ costâque umbonali obsoletissimis; dentibus lateralibus parvis, distinctis, subæquidistantibus.* Long. 0·60; lat. 0·70.

Hab. St. Nicholas, isle of Zebu; sandy mud, low water.

In external appearance bears much resemblance to a *Cyrena*.

Nineteen specimens of Stuffed Birds, from Van Diemen's Land, presented by Thomas Alexander, Esq., F.Z.S., were exhibited.

Letters were read from E. D. Dickson and H. J. Ross, Esqrs., Corr. Memb., which were accompanied by a donation of Mammals, Birds, Reptiles, Insects, &c. Also seven Birds' Skins, from the island of Cerigo, presented by Capt. Thomas Graves, R.N., Corr. Memb.

The birds, which were in an excellent state of preservation, were named by Mr. Fraser, and the following notes by Messrs. Dickson and Ross were read:—

Circus rufus, Briss.

"Shot near Lake Tajoora, December 1, 1842. Female. Had an immense quantity of eggs in its ovarium; I never before met with so astonishing a number in any bird. Its brain was large, and, excepting the tubercular masses on its base, consisted of almost entirely cineritious matter. Cranium strongly marked with protuberances on its upper surface."

Alcedo ispida, Linn.

"Female. Shot on the sea-shore 18th of November 1842. Said to be a rare bird at Tripoli. This specimen, together with others I found at Trebizond, were a good deal smaller than those birds I procured at Erzeroom."

Muscicapa grisola, Linn.

"Very common about the trees on the Jebel mountains, May and June 1843."

Muscicapa albicollis, Temm.

"Male. Killed at Tripoli June or July 1843. Female. Common in the Owaniyeh valley on Jebel mountains, May 1843. Flies exactly like a swallow."

Lanius Excubitor? Linn.

"Male. Sent by Mr. Gagliuffi, H.M.B. Vice-Consul at the capital of Fezzan, March 1843."

Digitized by Google

Lanius rufus, Briss.

"Male. Shot on the Jebel mountains June 1843. Female. Food small beetles: disposition shy. Total length from bill to tail 7·6 inches. Common on Jebel mountains: shot 5th of May 1843."

Oriolus galbula, Linn.

From the island of Cerigo, Mediterranean. Presented by Capt. Thomas Graves, R.N.

Saxicola rubetra, Bechst.

"Male. Shot in a garden on the 9th of November 1843. Female. Shot on the Jebel mountains May 1843."

Saxicola Deserti, Rüpp.

"Shot at Sokna by G. B. Gagliuffi, Esq., March 1843. Food, ants and other small insects."

Saxicola Œnanthe, Gould.

Two specimens. Shot by G. B. Gagliuffi, Esq. at Sokna, March 1843, and one in the autumn of 1843.

Saxicola —— ?

This is apparently a new species, nearly allied to *S. cachinnans*, Temm., but I defer describing it until more specimens are received.

"Male. Shot in the Wadi Belkashim. Sent from Fezzan in the autumn of 1843 by G. B. Gagliuffi, Esq."

Saxicola —— ?

"A young bird, shot upon the Jebel mountains June 1843. Appears to belong to an undescribed species."

Phœnicura ruticilla, Swains.

"Male. Shot by G. B. Gagliuffi, Esq. at Sokna, March 1843."

Curruca cinerea, Bechst.

"Sent from Fezzan during the autumn of 1843 by G. B. Gagliuffi, Esq."

Curruca melanocephala, Lath.

"Male. Shot in a garden on the 9th of November 1843. Eyelids orange-red."

Curruca orphea, Gould.

"Shot in Owaniyeh valley on the Jebel mountains 5th of May 1843. Male. Total length 6·7 inches: food beetles: eyes pale straw-yellow, with dilated black pupils: lives among rushes. It had the largest testes I ever observed in any bird of its size; they were 0·7 of an inch long, and equal in magnitude to its gizzard."

Salicaria Phragmitis, Selb.

"Shot on the Jebel mountains May 1843."

Salicaria galactotes, Gould.

"Male. Songster. Food, minute grasshoppers, insects, &c. Total length 7¼ inches; bill dusky brown, legs light brown; testicles white and very large, each being nearly equal in size to its gizzard. Habits shy. This lovely bird, whenever it perches upon a branch, wags its tail like a *Motacilla*."

Digitized by Google

Malurus Acaciæ? Rüpp.

"Female. Shot by G. B. Gagliuffi, Esq., between Tarhona and Benoleed. Food, ants."

Motacilla neglecta, Gould. *Budytes neglecta*, Cuv.

"Sent from Fezzan during the autumn of 1843 by G. B. Gagliuffi, Esq."

Anthus pratensis, Bechst.

"Male. Shot on the 30th of October 1843."

Alauda arvensis, Linn.

"Shot on the 30th of November 1843, in the vicinity of Lake Tajoora, where they were collected into large flocks in the stubble-fields, apparently migrating. They were very shy."

Alauda brachydactyla, Temm.

"Male and female. Shot by G. B. Gagliuffi, Esq. at Sokna in March 1843."

Alauda cristata? Linn.

"Samsoon Lark. Very common at times. Shot in May? 1842."

Pyrgita domestica? Cuv.

Two very pretty varieties; one nearly white, but retaining the black throat. "Male. Sent by G. B. Gagliuffi, Esq., March 1843."

The other pale cinnamon. "Sent from Fezzan during the autumn of 1843 by G. B. Gagliuffi, Esq."

Cuculus canorus, Linn.

"Shot either in June or July 1843."

Perdix petrosa, Lath.

"Killed in December 1842. Very common all over the country, frequenting ravines, hills, and all places where they can find cover, and often met with even in our gardens: flies in coveys: a shy bird: used as food by the natives, though its flesh is dry and without flavour. Its heart is so small that it does not exceed that of a sparrow."

Otis Houbara, Linn.

"Male. Houbara. Caught by falcons on the 23rd of March 1843. Total length 28½ inches; stomach capacious, but thin; distended with bits of vegetable matter, like portions of green dates."

Cursorius Isabellinus, Meyer.

"Male. Shot at Tripoli. This is probably an inhabitant of the inland lakes of Africa, for it makes its first appearance with us during the months of July and August, and quits us again for the winter. It frequents pools and other moist situations, where it occasionally is seen in astonishing numbers. A shy bird, and reckoned good eating."

Ardea cinerea, Linn.

"Brought by an Arab 14th of March 1843. Male. Total length 53½ inches: eyes of a sulphur-yellow colour; bill bright yellow; legs light brown with dusky claws."

Digitized by Google

Ardea garzetta, Linn.
From Cerigo. Presented by Capt. Thomas Graves, R.N.

Ardea comata, Pall.
From Cerigo. Presented by Capt. Thomas Graves, R.N.

Ibis Falcinellus, Temm.
From Cerigo. Presented by Capt. Thomas Graves, R.N.

Gallinula chloropus, Lath.
"Sent from Fezzan during the autumn of 1843 by G. B. Gagliuffi, Esq."

Botaurus stellaris, Steph.
"Sent from Fezzan during the autumn of 1843 by G. B. Gagliuffi, Esq."

Limosa melanura, Leisl.
"Tripoli, June or July 1843."

Himantopus melanopterus, Meyer.
"Tripoli, June or July 1843," and an apparently young bird. "Shot at Tajoora Lake 1st of December 1843." And two specimens from Cerigo, presented by Capt. Thomas Graves, R.N.

Charadrius pluvialis, Linn.
"Young female? Total length 13·3 inches. Contents of its gizzard insects, grass and pebbles. Shot on the 17th of November 1843. Said to be common on the shore to the westward of the town."

Charadrius hiaticula, Linn.
"Female. Shot on the 5th of December 1843. Legs pale orange-red. Common along the sea-beach in December."

Tringa variabilis, Meyer.
"Shot 24th of December 1842, on the sea-side."

A beautiful specimen of *Siliquaria anguina* formed a part of this donation.

Digitized by Google

April 23, 1844.

William Yarrell, Esq., Vice-President, in the Chair.

A continuation of Mr. Sylvanus Hanley's paper on new *Tellinæ* was read, containing the following descriptions:—

TELLINA SINCERA. *Tel. testâ* T. carnariæ *simillimâ, sed majore, latiore, compressâ et albidâ; striis tenuioribus; ligamento valdè angusto; natibus paululùm ad latus anticum spectantibus; margine ventrali tantùm subarcuato; dentibus lateralibus conspicuis, subæquidistantibus.* Long. 1·20; lat. 1·40 poll.

Hab. ——? Mus. Cuming, Metcalfe.

Extremely like *T. carnaria*, but larger, broader, and more flattened. The oblique striæ are minute, and almost entirely disappear in aged specimens.

TELLINA SENEGALENSIS. *Tel. testâ* T. splendidæ *simillimâ, sed striis sulcisque exilioribus magisque confertis; extremitate etiam posticâ, striis arcuatis obliquis in utrâque valvulâ, ornatâ; superficie internâ purpureâ, albo posticè biradiatâ.* Long. 0·80; lat. 1 poll.

Hab. Senegal.

An extremely common shell, bearing some slight resemblance to *carnaria*, and has probably been hitherto neglected, from its close approximation to the *splendida* of Anton.

TELLINA INCARNATA. *Tel. testâ obovatâ, subobliquâ, inæquilaterali, ventricosâ, solidâ, incarnatâ aut albido-rosea, impolitâ; striis elevatis concentricis tenuissimis, striis radiantes elevatas confertissimè decussantibus; margine ventrali arcuato, posticè sursùm accliviore; dorsali anticè declivi et prope nates paululùm incurvato, posticè elevatiore subarcuato et subitò declinante; ligamento infosso; superficie internâ flavescente, margines versus subroseâ; dentibus lateralibus maximis.* Long. 0·70; lat. 0·95 poll.

Hab. San Nicholas, Zebu; sandy mud, low water.

This graceful species is allied in sculpture to the *decussata* of Lamarck, but the shape and colouring easily distinguish it. In almost every adult specimen the tips of the beaks are chalky white, the umbones yellow, and the ligamental edge rosy.

TELLINA LYRA. *Tel. testâ ovali, tenui, compressâ, nitidiusculâ, albâ, striis concentricis elevatis ornatâ, interstitiis lævigatis; margine ventrali ad utramque extremitatem arcuato, mediò convexiusculo; dorsali posticè altiore, convexo satisque declinante, anticè prope lunulam excavatam, aut horizontali aut leviter acclivi; latere antico paululùm longiore, rotundato; extremitate posticâ obtusâ;*

Digitized by Google

natibus acutis, prominentibus; flexurâ obsoletâ; dentibus lateralibus distinctis, antico approximato, postico parvo, remotiore. Long. 1·80; lat. 2·60 poll.

Hab. Tumbez, Peru.

This most exquisite shell will probably prove inequivalve, but as I have never met with any but left valves, I can only judge so from analogy. Although very different in shape, its texture and the excavated dorsal areas remind us of *Burnetti*. The ventral fold is obsolete, and the situation of the umbonal ridge is indicated by a linear carina, which is only separated from the dorsal edge by a narrow concavity.

Tellina Philippinarum. *Tel. testâ ovatâ aut subovatâ, tenui, subæquilaterali, intus extusque candidâ, nitidâ, concentricè et tenuissimè striatâ; margine ventrali arcuato, posticè sursùm acclivi; dorsali antico brevi, recto, subdeclivi; latere postico subcuneiformi; ligamento prominulo; extremitate anticâ obtusâ; cardine dente laterali (in junioribus subobsoleto) antico subapproximato.* Long. 0·70; lat. 1 poll.

Hab. St. Nicholas, isle of Zebu, and Jimmamailan, isle of Negros.

This shell, which appears to be common throughout the Philippine Islands, reminds us by its shape of the *T. solidula*. It is rather variable in its proportions, and but rarely attains the assigned dimensions. In aged specimens the vicinity of the umbones is usually of a flesh-colour or tawny orange.

Tellina Listeri. *Tel. testâ obovatâ, solidâ, ventricosâ aut subventricosâ, æquilaterali, glabrâ, extus intusque candidâ; margine ventrali mediò subrecto; dorsali anticè arcuato paululùmque declivi, posticè recto, declivi; latere antico dilatato, obtusè rotundato; postico obtusissimè biangulato; ligamento magno, infosso; natibus obtusis; umbonibus plerumque subplanulatis; cardine dente laterali antico subapproximato.* Long. 2·3; lat. 3· poll.

Hab. Senegal. Mus. Cuming, Hanley.

This species appears to be represented in Lister's 'Historia Conchyliorum,' plate 288. fig. 235. Although in general shape it is approached by many of its section (*Tellinæ* with a single lateral tooth), its superior size and solidity render it remarkable.

Tellina pumila. *Tel. testâ* T. Philippinarum *simillimâ, sed angustiore; margine ventrali mediò subrecto; dorsali utrinque recto aut subconcavo, anticè paululùm declivi, latere postico cuneiformi; margine antico recto, verticali.* Long. 0·60; lat. 0·90 poll.

Hab. Valparaiso; sandy mud, from seven to thirty fathoms.

Easily to be confused with *T. Philippinarum*, but is decidedly narrower and the margins less convex. The front dorsal edge, which is longer and less sloping than in that species, forms an angle with the straight and direct anterior margin.

Tellina Culter. *Tel. testâ parvâ, ovatâ, inæquilaterali, tenuiusculâ, convexâ, nitidâ, intus extusque aurantio-roseâ, lævigatâ;*

Digitized by Google

margine ventrali anticè arcuato, posticè sursùm acclivi; dorsali anticè magis minusve convexo satisque declivi, posticè recto et valdè declivi; latere antico producto, ad extremitatem obtusè rotundato; postico acuminato; natibus acutis; ligamento vix prominulo; flexurâ ventrali obsoletâ; cardine dente laterali antico parvo, approximato. Long. 0·35; lat. 0·55 poll.

Hab. Cagayan, province of Misamis, Mindanao; twenty-five fathoms, sandy mud.

This species is closely allied to the *tenuis* of our own shores, but may be distinguished by its acuminated extremity. In young specimens there are indications of concentric striæ near the front of the ventral margin.

TELLINA CORBULOIDES. *Tel. testâ subovali, inæquivalvi, solidâ, subventricosâ, sublævigatâ, roseo-incarnatâ (intus plerumque aurantio-rubrâ); margine ventrali sinistræ valvulæ, ultra marginem convexiusculum alterius, prominente; latere antico breviore, obtusè acuminato; extremitate posticâ rotundatâ; aream dorsali posticâ in adultis subplanulatâ; natibus obtusis; flexurâ ventrali distinctâ; cardine dente laterali, parvo, approximato, antico.*

Var. *Testâ extus intusque candidâ.* Long. 0·80; lat. 1·20 poll.

Hab. Catbalonga, isle of Samar; ten fathoms, soft mud.

The general appearance of this shell gives us the idea of a *Corbula*. It is covered when fresh with a thin fugacious epidermis, which reflects the most brilliant prismatic colours.

TELLINA CYCLADIFORMIS. *Tel. testâ parvâ, rotundato-subtrigonâ, tenui, ventricosâ, intus extusque incarnatâ aut pallidè rosea, sublævigatâ; margine ventrali convexo; dorsali utrinque declivi, convexiusculo; latere antico rotundato et paullò breviore; extremitate posticâ obtusè subangulatâ; ligamento prominulo; flexurâ costâque umbonali obsoletis; cardine dente laterali parvo, approximato, antico.* Long. 0·20; lat. 0·25.

Hab. St. Nicholas, Zebu.

Not unlike *pisiformis*, but destitute of oblique striæ.

TELLINA INSCULPTA. *Tel. testâ oblongo-elongatâ, solidiusculâ, compressâ, æquilaterali, extus intusque candidâ; sulcis confertis concentricè exaratâ, striisque tenuissimis radiantibus (præsertim posticè) decussatâ; margine ventrali elongato, subrecto; dorsali utrinque subrecto, subdeclivi; extremitate posticâ subbiangulatâ; flexurâ ventrali distinctâ; cardine dente laterali quamplurimum approximato, antico.* Long. 1; lat. 2 poll.

Hab. Chiriqui, West Columbia; sandy mud, three fathoms.

This unique and elegant shell possesses the shape and general appearance of a *Psammobia*. The single anterior lateral tooth is so close to the primary ones, that the hinge appears to be composed of three cardinal teeth in the left valve. Beyond the almost obsolete umbonal ridge the concentric sulci become broken into small scales. The delicate radiating striæ are quite obsolete in front. The shell seems slightly inequivalve.

Digitized by Google

TELLINA INÆQUALIS. *Tel. testâ subovatâ, valdè inæquilaterali, solidâ, convexâ, candidâ, tenuiter striatâ; striis supernè obliquis, infernè concentricis, flexuosis; supra costam umbonalem inconspicuam, rugis erectis flexuosis, asperatâ; margine ventrali convexissimo; dorsali anticè subincurvato et valdè declivi, posticè brevi, recto, subdeclivi; latere antico producto, ad extremitatem attenuato, rotundato; extremitate posticâ obtusâ; natibus acutis; lunulâ distinctâ; superficie internâ candidâ, aut flavescente; cardine dente laterali magno, subremoto, antico.* Long. 0·90; lat. 1·20 poll.

Hab. Ceylon. Mus. Cuming.

An unique specimen of this curious shell is in the museum of Mr. Cuming, and reminds us in many particulars of the *Tellina Gargadia*; but that species is neither so narrow nor so greatly inequilateral, its oblique striæ do not extend over the posterior portion of the shell, and its hinge is clearly provided with two lateral teeth. The elevated flexuous wrinkles radiate down the umbonal slope in three distinct lines.

TELLINA FELIX. *Tel. testâ subovali, solidiusculâ, valdè inæquilaterali, convexiusculâ, nitidâ, lævigatâ, intus extusque rosea; margine ventrali vix convexiusculo; dorsali anticè vix declivi, convexo, posticè valdè declivi; latere postico brevissimo, obtusè subtruncato, infernè subangulato; extremitate anticâ rotundatâ; costâ umbonali et flexurâ ventrali subobsoletis; cardine dente laterali magno, approximato, antico.* Long. 0·38; lat. 0·80 poll.

Hab. Panama; sandy mud, six to ten fathoms.

This elegant little shell approximates in form to the British *Donacina*, but differs as well in colouring as in sculpture and teeth.

TELLINA COLUMBIENSIS. *Tel. testâ ellipticâ aut oblongo-ellipticâ, compressiusculâ, subtenui, lævigatâ, intus extusque albidâ, epidermide tenuissimâ, fulvo-cinereâ indutâ; margine ventrali mediò convexiusculo, utrinque arcuato; dorsali utrinque convexo, anticè paullò, posticè satis declivi; latere antico longiore, rotundato; extremitate posticâ acuminatâ; flexurâ subobsoletâ; dentibus primariis minimis, lateralibus nullis.* Long. 1·70; lat. 3 poll.

Hab. Monte Christi, West Columbia; sandy mud, twelve fathoms.

Its more compressed valves and minute teeth will distinguish it from the few species which are allied to it in outline. The hinge-margin is very short and rather broad. The general shape is that of *T. Soverbii*.

TELLINA SOULEYETI. *Tel. testâ oblongâ, tenuiusculâ, convexo-depressâ, intus extusque albidâ, lævigatâ; margine ventrali magis minusve convexo; dorsali anticè convexiusculo et subdeclivi, posticè subrecto aut subretuso et valdè declivi; flexurâ costâque umbonali distinctis; ligamento infosso; natibus acutis; latere antico longiore, rotundato; extremitate posticâ subrostratâ; dentibus lateralibus nullis.* Long. 0·75; lat. 1·25 poll.

Hab. St. Nicholas, Zebu; sandy mud at low water.

I have named this species in honour of my friend M. Souleyet,

Digitized by Google

whose investigation of the *Pteropoda* promises to be of high interest to natural science.

TELLINA UNDULATA. *Tel. testâ oblongâ, tenuissimâ, compressâ, impolitâ, intus extusque albidâ, subobliquè et concentricè undulatâ; margine ventrali convexo; dorsali anticè subrecto et vix declivi, posticè incurvato, satisque declivi; latere postico brevi, attenuato, rostrato; flexurâ costâque umbonali distinctis; natibus acutis; dentibus lateralibus nullis.* Long. 0·40; lat. 0·80 poll.

Hab. St. Elena, West Columbia; sandy mud, six fathoms.

The oblique waves are chiefly conspicuous in front of the shell, and become concentric posteriorly. This character is so distinct that the species cannot possibly be confounded with any of this genus. The general shape is that of *crucigera*; the fold is very distinct and the ligament sunken.

TELLINA MICANS. *Tel. testâ subovali, tenui, nitidissimâ, compressâ, nivea, lævigatâ; margine ventrali convexo; dorsali anticè convexiusculo, subhorizontali; latere antico longiore, ad extremitatem rotundato aut obtuso; postico cuneiformi; flexurâ costâque umbonali obsoletis; natibus obtusis; dentibus lateralibus nullis.* Long. 0·50; lat. 1 poll.

Hab. Catbalonga, isle of Samar, and Bias, isle of Negros.

Bears a close resemblance to the *margaritacea* of Lamarck, but that species is not devoid of lateral teeth. It is a glassy-looking shell and highly polished; the surface too is sometimes slightly opalescent.

TELLINA CUSPIS. *Tel. testâ ovatâ, solidiusculâ, convexâ, nitidiusculâ, rosea, anticè et infernè substriatâ; margine ventrali arcuato; dorsali utrinque subdeclivi, anticè convexo, posticè recto aut subretuso; flexurâ costâque umbonali distinctis; latere antico paululùm longiore, rotundato; postico subacuminato, subrostrato; dentibus lateralibus nullis.* Long. 1·20; lat. 1·85 poll.

Hab. —— ? Mus. Cuming, Walton, Metcalfe.

A beautiful shell, whose general appearance is that of an abbreviated specimen of the *T. depressa* of Lamarck, which latter must resume its prior appellation of *incarnata*, being decidedly the species so designated by Linnæus.

"Descriptions of *Marginellæ* collected during the voyage of H.M.S. Sulphur, and from the collection of Mr. Cuming," by Mr. Hinds.

MARGINELLA, Lamarck.

Section I. *Phænospira.*

MARGINELLA PIPERATA. *Mar. testâ obovatâ, maculis parvis nigris et albidis, interdum longitudinaliter coalitis, confertim ornatâ; spirâ retuso-conicâ, obtusâ; anfractu ultimo rotundatè angulato; spirâ lineâ unicâ comitatâ; labro incrassato, extùs nigro maculato, intùs lævi; columellâ quadriplicatâ.* Axis 9 lin.

Hab. —— ?

Cab. Cuming.

Digitized by Google

MARGINELLA SCRIPTA. *Mar. testâ parvâ, retusè ovatâ, cinereâ, lineis nigris longitudinalibus valdè angulatis (zic-zac) sparsim maculatis; spirâ retusissimâ; labro intùs denticulato; columellâ quinqueplicatâ, duabus superioribus transversis.* Axis 3½ lin.

Hab. Straits of Macassar; in eleven to fifteen fathoms, coarse sand.

Cab. Belcher.

MARGINELLA LIVIDA. *Mar. testâ ovatâ, pallidè cærulescente, obsoletè trifasciatâ; spirâ retusâ; labro albido, valdè incrassato, intùs lævi; columellâ latè callosâ, suprà spiram ascendente, quadriplicatâ.* Axis 6½ lin.

Hab. Cuba.

Cab. Grüner.

Shell ovate, dull pale blue, indistinctly banded by a darker colour; the face covered by a white callosity spreading over the columella, ascending along the spire, and running into the labrum, which is thus thickened even beyond what is usual; the back shouldered and slightly angular.

It is to the liberality of M. Grüner that I am indebted for the opportunity of including this shell in these descriptions.

MARGINELLA NODATA. *Mar. testâ elongatè ovatâ vel subfusiformi, luteo-olivaceâ, lineis nigris subflexuosis longitrorsum ornatâ, punctis concoloribus conspersis; spirâ elongatâ, inconspicuè plicocostatâ; labro incrassato, intùs denticulato; columellâ quadriplicatâ.* Axis 10 lin.

Hab. Cape Blanco, west coast of Africa; in from twelve to fifteen fathoms, among sand.

Cab. Belcher.

With the general aspect and character of *M. Cleryii*, but somewhat larger, more broadly shouldered, the longitudinal lines studded at intervals with dark spots, and which are somewhat regularly disposed in the transverse direction; and lastly, the spire is less elongated and furnished with rather indistinct pliciform ribs.

MARGINELLA MUSICA. *Mar. testâ ovatâ, cinereo-olivaceâ, lineis nigris transversim ornatâ; spirâ retuso-conicâ; labro paululùm incrassato, intùs lævi; columellâ quadriplicatâ.* Axis 8 lin.

Hab. Cape Blanco, west coast of Africa; in thirty-five fathoms, sand.

Cab. Belcher.

Readily distinguished from any species hitherto recorded by the transverse, somewhat distant, and regularly disposed dark lines.

MARGINELLA BELCHERI. *Mar. testâ concinnè ovatâ, albâ, lineis eleganter punctatis raris, frequentioribus, vel confertis transversim dispositis, interdum albo fasciatâ; spirâ mediocri, conicâ; labro incrassato, albo, prope medium subdilatato, intùs lævi; columellâ quadriplicatâ.* Axis 9 lin.

Hab. Cape Blanco, west coast of Africa; in from twelve to fifteen fathoms.

Cab. Belcher.

Digitized by Google

This very beautiful species displays considerable variation in the character of its markings. In some individuals the exterior is nearly white, with a few scattered transverse lines, composed of elegant minute dottings, and these are perhaps the older shells; from this they gradually become more and more covered with them, till in some the whole surface is quite darkened. In this latter case irregular lines become conspicuous in the longitudinal direction. In many specimens the transverse lines are separated by intervals, which permit the ground-colour of the shell to show through like milk-white bands. The outer lip seems in all cases to retain its uniform white colour, and at its upper part is slightly emarginate, but becomes thickened at and a little beneath the centre.

MARGINELLA SAPOTILLA. *Mar. testâ elongatè ovatâ, ferè subcylindraceo-ovatâ; cinereâ vel glaucescente, concolore; spirâ retusoconicâ; aperturâ intùs fuscâ; labro incrassato, recto, albo, posticè fulvo, intùs lævi; columellâ quadriplicatâ.* Axis 11 lin.

Hab. Panama; in from five to thirteen fathoms, sandy mud.

Cab. Belcher et Cuming.

The American analogue of *M. cærulescens*, or more correctly *M. prunum*, than which it is of smaller size, more cylindrical in shape, whence result its straight outer lip, less fullness and roundness of the shoulders, but without any disposition to that obscure banding which is visible in some specimens of *M. prunum*. Both species present a rich brown colour within the aperture, and in general appearance they are remarkably alike.

MARGINELLA CONSTRICTA. *Mar. testâ albidâ, obscurè trifasciatâ; spirâ retusè conicâ; anfractu ultimo prope medium coarctato; labro incrassato, medio incurvato, intùs lævi, supernè ad spiram adscendente; columellâ quadriplicatâ.* Axis 8 lin.

Hab. —— ?

Cab. Cuming.

MARGINELLA NIVOSA. *Mar. testâ ovatâ, cinereo-fuscâ; maculis lacteis laceratis super lineas longitudinales dispositis; spirâ retusâ; labro subrecto, incrassato, albo, ad spiram adscendente, intùs infra medium læviter denticulato; columellâ quadriplicatâ.* Axis 9 lin.

Hab. —— ?

Cab. Cuming.

A full-shaped oval shell of a fawn colour, with longitudinal lines, as if marking the periods of growth, on which are aggregated small irregular milk-white spots; these are generally clustered on the lines, but a few occupy the intervals between them. The outer lip is of an uniform white, and beneath its middle are a few rather indistinct denticulations; above it ascends to the spire, which it renders callous on that side. Within it is of a pale fawn-colour.

MARGINELLA PRUINOSA. *Mar. testâ ovatâ, coarctatâ, albidâ, obsoletè trifasciatâ, maculis parvis lacteis conspersâ; spirâ conicoretusâ, subcallosâ; labro incrassato, paululùm incurvato, intùs*

Digitized by Google

læviter denticulato; aperturâ angustâ; columellâ quadriplicatâ. Axis. 6 lin.

Hab. West Indies.

Cab. Cuming.

In some respects similar to the foregoing, but, in the place of its full rounded form, this is contracted towards the middle of the body-whorl. The fasciation is constant on all the specimens, but always very faint and indistinct, and the small milk-white spots are scattered with little regularity over the surface.

MARGINELLA AUSTRALIS. *Mar. testâ retusè ovatâ, albidâ vel pallidè corneâ; spirâ conico-retusâ; labro incrassato, ponè albido, intùs lævi; columellâ quadriplicatâ, versus basin albo fasciatâ.* Axis $3\frac{1}{3}$ lin.

Hab. North-west coast of Australia; in coral sand at low water. Mr. Dring, R.N.

Cab. Cuming.

The characters of this little shell are quite unobtrusive, if we except the white base of the columella; and this may serve to distinguish it from any species hitherto on record.

MARGINELLA VITREA. *Mar. testâ coniformi, hyalinâ, nitidâ; spirâ valdè retusâ; labro paululùm incrassato et reflexo, intùs lævi; columellâ plicis quatuor gracilibus.* Axis 3 lin.

Hab. West coast of Africa.

Cab. Belcher.

MARGINELLA FUSIFORMIS. *Mar. testâ fusiformi, albidâ vel pallidè corneâ; spirâ elatâ, obtusâ; anfractu ultimo gradatim attenuato; labro paululùm incrassato, intùs lævi; aperturâ lineari; columellâ quadriplicatâ.* Axis 3 lin.

Hab. Straits of Malacca; in seventeen fathoms, mud.

Cab. Belcher.

This species departs so far from the usual outline of the genus as to become decidedly fusiform. The recent shell is most probably of a delicate horn-colour, though the prevailing number of our specimens are white, shining and glossy, and, there seems little doubt, have lost their original colour.

The following species belongs to a section of this genus, which might with much propriety be separated as a subgeneric group, under the name of *Volvarina*. They are all delicate and rather thin shells, with an apparent spire, the labrum never varixed, and usually not even thickened, with a sharp edge, always bent in on the aperture. The columellar folds are nearly constantly four in number, slender, and more or less oblique. *M. avena*, Valenciennes, is a typical species.

MARGINELLA NITIDA (VOLVARINA). *Mar. testâ elongatè ovatâ, fuscâ, politâ, nitidâ, concolore; spirâ conicâ, obtusâ; labro tenui, acuto, inflexo, pallido; columellâ quadriplicatâ.* Axis 4 lin.

Hab. ——?

Cab. Cuming.

Digitized by Google

Section II. *Cryptospira.*

MARGINELLA TRICINCTA. *Mar. testâ obeso-ovatâ, cinereo-cærulescente, fusco trifasciatâ, labro incrassato, luteo, intùs lævi; columellâ sexplicatâ, ad basin albâ; plicis tribus superioribus transversis, supremâ paululùm obsoletâ.* Axis 11 lin.

Hab. Straits of Macassar; in eleven fathoms, coarse sand.

Cab. Belcher.

MARGINELLA BLANDA. *Mar. testâ ovatâ, tenui, sardonychiâ, obsoletè fasciatâ; spirâ vix occultâ, pallidâ; labro subincrassato et subreflexo, intùs lævi; columellâ albidâ, sexplicatâ, plicis superioribus evanidis.* Axis 9 lin.

Hab. Cape Blanco, west coast of Africa; in twelve to fifteen fathoms.

MARGINELLA IMBRICATA. *Mar. testâ ovatâ, albidâ, maculis rufis quadratis propè medium unifasciatâ, aliter punctis transversis ordinatè vestitâ; apice puncticulato; labro reflexo medio et cum basi columellæ ustulato; columellâ subcallosâ, quadriplicatâ.* Axis 5 lin.

Hab. Acapulco. Col. Moffat.

Cab. Cuming.

In one specimen the tessellated band which encircles the body-whorl is broken up into a number of small spots and punctations, so that though these markings present usually a nearly square shape, they are most probably disposed to vary. The shell in some respects approaches *M. interrupta.*

MARGINELLA MURALIS. *Mar. testâ elongatè ovatâ, ferè subcylindraceâ, lactea, nitidâ; maculis pallidè rufis quadratis transversis ornatâ, interdum albo marginatis, majoribus per series tres dispositis; labro vix incrassato, subinflexo, intùs sulcato; columellâ plicis tribus inferioribus distinctis, obliquis, alteris superioribus obsoletis transversis.* Axis 5½ lin.

Hab. ——?

Cab. Cuming.

This is a remarkably pretty glittering species, and the specific name seems justified by the appearance of the pale red regularly-disposed square markings, which resemble the extremities of the bricks in a wall. The labrum is not merely toothed within, but distinctly sulcate. It approaches M. Kiener's *M. maculosa,* but the ornation is quite of a different character, and it has no angular elevation on the body-whorl.

MARGINELLA SAGITTATA. *Mar. testâ retuso-ovatâ, pallidâ, lineis rufis sagittatis transversis, alteris longitudinalibus confluentibus, ornatâ; apice puncticulato; labro subinflexo, intùs lævi; columellâ vix quadriplicatâ.* Axis 5 lin.

Hab. Brazils: Humphreys.

Cab. Cuming.

Shell shortened, ovate, the ornation consisting of reddish brown, transverse, arrow-headed markings, disposed in regular series and

Digitized by Google

connected by waved longitudinal lines. The labrum is not the least thickened, and slightly inflexed, and the superior fold of the columella is scarcely distinguishable.

"On the evidence of the former existence of Struthious Birds distinct from the Dodo in the islands near Mauritius," by H. E. Strickland, Esq., M.A.

It is well known that Leguat, a French Protestant refugee, who for more than two years (from 1691 to 1693) resided in the island of Rodriguez, near Mauritius, described a bird under the name of *le Solitaire*, which Latham considered to be allied to, but distinct from, the Dodo, and which Gmelin denominated *Didus solitarius*. Later authors have supposed Leguat's bird to be either altogether fictitious, or to be founded on an imperfect description of the true Dodo, *Didus ineptus*, Linn., of whose former existence in the island of Mauritius there is now no dispute. Considering, however, that Leguat was a man of education, and that the rest of his narrative bears intrinsic proofs of veracity, there is no reason to doubt the general accuracy of his description of the *Solitaire*; and if this be admitted, it follows that his bird was distinct, generically as well as specifically, from the Dodo.

The *Solitaire*, as described and figured by Leguat, must have differed from the Dodo in the following respects:—

1. The beak is stated to resemble that of a turkey, except in being rather more curved. Leguat's figure corresponds with this description, and exhibits a moderate-sized gallinaceous-formed beak, totally unlike that which we know the Dodo to have possessed.

2. The *Solitaire* is said to have had hardly any tail, whereas the Dodo was depicted with an arched tail, like that of the ostrich.

3. The *Solitaire* is said to be longer in the leg ("plus haut montée") than a turkey, while the Dodo was a very short-legged bird, as shown by the specimens in the British and Oxford Museums.

4. The *Solitaire* carried its neck erect, and this member was said to be longer in proportion than that of a turkey. But the Dodo is depicted with a short, thick and curved neck, corresponding with the massive proportions of its head.

5. Though unable to fly, the wings of the *Solitaire* appear to have been more developed than in the Dodo, as they were enlarged at the end into a knob the size of a musket-ball, with which the bird attacked its enemies.

6. The female *Solitaire* is stated to have a kind of band (probably composed of feathers) at the upper part of the beak, resembling a widow's cap; but in the Dodo the whole face was naked.

It seems then sufficiently evident, that as late as the year 1693 the island of Rodriguez was inhabited by a large species of bird distinct from the Dodo of Mauritius, and now exterminated. This bird was unable to fly; and Leguat, who gives a minute description of its habits, mentions the remarkable circumstance that it lays one egg on a heap of palm-leaves a foot and a half high, a character which possibly indicates an affinity to *Talegalla* and the *Megapodiinæ* of Australia.

Digitized by Google

The *Solitaire* of Rodriguez seems not to have been mentioned by any other author than Leguat, and we may presume that the species was exterminated within a few years after his visit.

There is evidence however that other apterous birds of this anomalous class formerly existed in the adjacent island of Bourbon. In the library of the Zoological Society is a manuscript presented by that active naturalist the late C. Telfair, Esq., who during his residence in Mauritius collected many valuable scientific and historical documents. This MS. is entitled 'Journal et Relation des Voyages faits par le S^{r} D. B. aux îles Dauphine ou Madagascar et de Bourbon ou Mascarenne.' 1669. The author, who seems to have been a very intelligent observer, speaking of the birds of the island of Bourbon, has the following passage:—

"Oiseaux de terre et leurs noms.

"*Solitaires*: ces oiseaux sont nommés ainsi, parce qu'ils vont toujours seuls. Ils sont gros comme une grosse Oye, et ont le plumage blanc, noir à l'extrémité des ailes et de la queue. À la queue il y a des plumes approchantes de celles d'Autruche, ils ont le col long, et le bec fait comme celui des bécasses, mais plus gros, les jambes et pieds comme poulets d'Inde. Cet oiseau se prend à la course, ne volant que bien peu.

"*Oiseaux bleus*, gros comme les *Solitaires*, ont le plumage tout bleu, le bec et les pieds rouges, faits comme pieds de poules, ils ne volent point, mais ils coureat extrêmement vite, tellement qu'un chien a peine d'en attraper à la course; ils sont très bons."

The author then proceeds to describe the wild pigeons and other birds of Bourbon.

It appears then that about the year 1670 the island of Bourbon was inhabited by two species of Struthious birds, one of which was called *Solitaire*, and the other *Oiseau bleu*. The *Solitaire* of Bourbon seems however to have been distinct from, though probably allied to, the bird of that name in Rodriguez. Its plumage is stated to have been white, with the wings and tail terminated with black, whereas Leguat describes the Rodriguez bird as greyish and brown. The Bourbon species further differed in having a tail similar to that of an ostrich, and in the beak being lengthened, "like that of a woodcock, but stouter," in which respect it must have resembled the Apteryx of New Zealand. The phrase "ne volant que bien peu" would seem to imply that the bird possessed some powers of flight, though possibly it may only mean that when hard pressed the bird aided its progress by flapping the wings, or by springing into the air for a short distance.

The *Oiseaux bleus* seem to have been a distinct species both from the Dodo and from the Solitaires of Bourbon and of Rodriguez, and to have been wholly unable to fly, but possessed, like the Apteryx, of great cursorial powers.

We are then justified in believing, from the relations of authors apparently deserving of credit, that the three contiguous islands of Mauritius, Bourbon and Rodriguez were formerly inhabited by at least four distinct species of birds, deprived, or nearly so, of the power of flight, and more nearly allied in structure to the Apteryx of New Zealand than to any other existing genus of birds. And if the ac-

Digitized by Google

count given by Cauche of a tridactylous and apterous bird in Mauritius, called *Oiseau de Nazarette*, be correct, we must believe in the former existence of a fifth species of the same anomalous family.

Nor need we be surprised at the supposition that the species allied to the Dodo may have been thus numerous, when we recollect that Prof. Owen has already shown that no less than five species of that ornithic wonder, the Dinornis, inhabited New Zealand at a very recent date, and were doubtless contemporaries of the still surviving Apteryx. Still less should we wonder at the speedy extinction of these birds after man took possession of the Mauritian archipelago. Confined to very small islands, unable to escape from their enemies by flight, and highly esteemed for food, they soon experienced the same fate as that of the Dinornis, a fate which will shortly overtake the unprotected Apteryx*.

Having thus shown that there is good historical evidence of the former existence of several Struthious or *Didiform* birds in the Mauritian group of islands, we may inquire whether any actual remains of these deceased species are still attainable. On this point I must be content rather to excite inquiry than to supply information. Of the Dodo, as is well known, we possess an entire head, and the feet of two individuals; but of the other birds above referred to, no relics have yet been identified. M. Quoy, however, assured M. de Blainville that the bones in the Paris Museum which Cuvier supposed to belong to the Dodo, were brought, not from Mauritius, but from Rodriguez; and it is therefore probable, as supposed by M. de Blainville, that they may have belonged to the *Solitaire* of Leguat. There are, too, certain bones from Rodriguez presented by Mr. Telfair to this Society (Zool. Proceedings, Part I. p. 31); and in the Andersonian Museum at Glasgow there are also some so-called "Dodo's bones from Mauritius." All these materials should be submitted to careful examination; and we may feel confident that if Prof. Owen, who has so skilfully demonstrated the affinities of the Dinornis from a few fragments of the skeleton, were to take these materials in hand, he would soon deduce some valuable results, whether positive or negative, from the investigation.

Much light also might probably be thrown on the subject if naturalists residing in Mauritius, Bourbon and Rodriguez would endeavour to obtain further evidence. The alluvia of streams, the soil on the floors of caverns, and even the ancient mounds of rubbish near towns and villages, should be carefully searched, and every fragment of bone preserved. We may hope that the success which has attended such researches in New Zealand will stimulate the naturalists of Mauritius to similar efforts, and that the *Solitaires* and *Oiseaux bleus* will ere long, like the Dodo and the Dinornis, take their just rank in our systems of ornithology.

* It is probable that in 1693, when Leguat visited Mauritius, the Dodo had been extinct a considerable time. He makes no mention of any such bird, but remarks "L'île était autrefois toute remplie d'Oyes et de Canards sauvages, de Poules d'eau, de Gelinottes, de Tortues de mer et de terre; *mais tout cela est devenu fort rare*;" showing that at that period, when the Dutch had occupied Mauritius for nearly a century, civilization had made great inroads on the fauna of the island.

Digitized by Google

Digitized by Google

May 14, 1844.

Rev. John Kirby in the Chair.

A letter was read from Walter Elliott, Esq. of Madras to Col. Sykes, which was accompanied by a number of skins of animals from the Neilgherry Hills and the Carnatic.

At the request of the Chairman, Professor Percy called the attention of the Meeting to the following remarks on the management of various species of Monkeys in confinement:—

"Having during the last five years paid considerable attention to the habits and management of various species of Monkeys, I have pleasure in complying with the request of Mr. Frazer, and presenting the results of my experience concerning these animals; apologizing, however, for the crude and unconnected style of this communication.

"1. *Character of the locality.*—I fitted up a capacious hay-loft for these animals, arranging the cages on each side. The roof at first consisted merely of slates without mortar. The cages were constructed of an iron grating in front, of wood partitions and roof, and of a brick wall at the back. The boards composing the roof were not rabbeted, so that warm air could freely escape from the cage through the roof. At the upper part of each cage was a close box, with an aperture large enough for a monkey to pass through, and a door opening externally and fixed on a slide. By this arrangement it was easy thoroughly to scrape and cleanse the floor of the box; every night, for a considerable period, fresh sawdust and straw were introduced into each box through the sliding-doors, and the animals regularly at the hour of dusk resorted to them, and remained in them during the night. Some of them, however, invariably threw out the straw. Great care was required to keep the bottom of the box clean. I would recommend, that in the event of such an arrangement being adopted, the bottom of the box should be made to slide out, and that it should be always removed during the day; and further, that a wire door should also be attached to the entrance from within, with a view to keep the animals out during the day and to secure them within during the night. I think that this arrangement of boxes is most applicable for the more delicate species, as those of the genus *Cebus*; and that for the large monkeys, as *Cynocephalus*, *Papio*, etc., it is quite superfluous.

"The great objection to the preceding plan is the trouble which it imposes upon the keeper. I am satisfied, however, that for the delicate monkeys above mentioned it is well adapted during the winter months; it has the advantage of keeping them warm without the aid of much artificial heat, which is at all times in a greater or less degree injurious. Of late, not having had any of the delicate

Digitized by Google

species, but only some individuals of the two genera *Papio* and *Cercopithecus*, I have found, as before remarked, that where two or three individuals are kept in each cage the arrangement of sleeping-boxes is not required.

"2. *Mode of heating*.—For two years during the winter months, from November to the beginning of April, I employed an Olmsted stove, which was kept constantly burning; since that time I have used, with much more convenience and greater economy, an Arnott stove. I have not observed any unpleasant or injurious effects to arise from this mode of warming, in consequence I believe of the free ventilation through the roof. Frequently during the winter nights the thermometer has sunk to the freezing-point. Of one thing I am convinced, namely, that a *constant* temperature is not only not beneficial, but is highly injurious to animal life. If we search through nature we do not find on any spot of the globe a uniform temperature, and in many regions where monkeys abound the extremes of heat and cold are very considerable. We are led then to the conclusion, from *à-priori* reasoning as well as from practical experience, that a condition of uniform temperature, as has been supposed by some persons, is not the condition adapted to promote the health of monkeys. The object in the construction of a menagerie for monkeys should be to enable these animals as much as possible to keep themselves warm, in precisely the same way as they do in nature; and this may in great measure be effected by adopting the arrangement of sleeping-boxes, in the manner previously described. During the winter nights I have not found it necessary to maintain the temperature higher than 45° or 50° Fahr., and, during the day, than 56° or 60°.

"3. *Food*.—I have always given as much variety as I could obtain in the season; I allow them daily bread and milk, potatoes roasted and occasionally raw, onions roasted as well as raw, lettuce, carrots, and any scraps of food which the house may furnish. In order to amuse their minds, if I may be allowed the expression, I direct rice or wheat to be thrown down amongst the sawdust; by this means they amuse themselves in picking up the grains. Great care is always to be taken that the feeble animals obtain their proper proportion of food: as is well known to those accustomed to the management of monkeys, the strong tyrannise greatly over the weak, and appropriate an undue measure of food to themselves. Keepers then should be particularly careful in ensuring to the weak monkeys their proper allowance; I have occasionally known some to become much emaciated in consequence of the tyranny exerted over them. I may remark concerning the Marmozet (*Hapale Jacchus*), that spiders appear to be beneficial; the animal eats them with great avidity.

"4. *Exercise and amusement*.—It is desirable as much as possible to induce the monkey to take exercise which is amusing to himself; various expedients may be suggested in the case of different species. Small trees which turn vertically are well adapted to many of the *Cebus* tribe. I am satisfied that amusement is an element of essential importance in the successful treatment of monkeys. We shall

Digitized by Google

be convinced of the truth of this statement when we reflect upon the excitable temperament of the monkey and upon his natural habits: in the forest or on the rocks, roaming and jumping about, whether in pursuit of food or in the way of frolic and gambols, his mind is ever employed and amused. If amusement be withheld from the monkey he becomes desponding, and his health declines in consequence, just as in the case of man. In the summer there is no difficulty in providing the required amusements in the open air: I have one monkey, a female *Cercopithecus radiatus*, who for two years during the summer consecutively was accustomed to roam at large over all the surrounding premises; she became a favourite with neighbours, who used to encourage her visits. She returned to her domicile with as much regularity as a common household animal.

"5. *Catamenia.*—I have a *Papio leucophæus*, which I have had four years, which regularly, so far as I have observed, menstruates at intervals of about six weeks. The labia become enormously swelled and protuberant, and during the subsidence of the swelling a sanguineous discharge appears. I have also a female *Cercopithecus radiatus* which has occasionally exhibited a discharge of the same character. I have noticed that two individuals of *Cercopithecus radiatus* are habitually affected with a copious mucous discharge from the vagina. I have sometimes seen large, transparent, colourless clots of mucus evacuated.

"6. *Lice.*—I have occasionally observed small lice, especially about the shoulders. I have found the best remedies in cleanliness and sulphur ointment.

"7. *Diseases.*—Although I have had seventeen living monkeys at one time I have only lost one, of phthisis pulmonalis; and in the case of that one (*Papio Rhæsus*) I am satisfied that the disease had far advanced before he came into my possession. I lost one, which had previously belonged to an itinerant showman (*Cercopithecus Mona*), of tubercular ulceration of the mucous membrane of the intestines; the liver, and, what is rare in man, the spleen also contained tubercular deposit. I have lost some from acute diarrhœa. In a Barbary Ape (*Inuus sylvanus*) which I lost I found only congestion of the vessels of the pia mater and a small hydated cyst at the base of the brain; he had just arrived at the period of cutting the canine teeth. A *Cercopithecus ruber* (Patas or Senegal monkey) died convulsed; it was examined by my friend Mr. Goodsir of Edinburgh, who found no appreciable lesion. A brown *Cebus*, which I kept during two years, died of mollities ossium. Several of the bones were broken, and, what is remarkable, the large canine teeth continued to be developed long after the bone of the head. Accordingly, they remained *in situ*, and formed beneath each eye a curious tubercle. No appearance of disease existed in any of the viscera. The first approach of the disease was indicated by slight dragging of the hinder extremities, a symptom which, so far as I have hitherto observed, has uniformly terminated after several months in death. The animal before death had a depraved appetite, occasionally eating his own ordure. He was much in the habit of masturbation, which he

Digitized by Google

practised by drawing the hairs of his fore-arm over the glans. I castrated him some time before death, but not until the ravages of mollities had very far advanced.

"In conclusion, I beg again to apologize for these unconnected remarks, which I have put together hastily and without being enabled to refer to any notes."

The conclusion of the paper by Dr. Falconer and Captain Cautley on the Gigantic Fossil Tortoise of India was then read:—

"On a former meeting we went through the anatomical characters presented by the remains of the *Colossochelys Atlas*. Commencing with the plastron, we traced the modifications of form through the costal elements of the carapace and the dorsal vertebræ, all of which bear the closest resemblance to the ordinary type of the Chersite Chelonians, or true land tortoises. A like result followed the examination of the extremities, which, as exhibited in the remains of the humerus, femur and ungueal phalanges, were seen to be constructed exactly on the plan of *Testudo*, with columnar legs and truncated club-shaped feet, as in the proboscidean Pachydermata. The same direction of affinity was observed throughout the conformation of the head. The only portions of the skeleton from which more or less direct evidence was not derived, were the neck and tail vertebræ, of which there were no specimens in the collection. The general result of the examination showed that the *Colossochelys Atlas* was strictly a land tortoise in every part of its bony frame; and the impressions of the horny scutes proved the like in regard to the arrangement of its dermal integument.

"The principal distinctive characters were found in the sternum, which is enormously thickened at its anterior extremity, along the united portion of the episternal bones, and contracted into a narrow neck, so that the width of the combined episternals does not much exceed their thickness: this thickened portion bears on its under side a deep massive cuneiform keel, which terminates upon the commencement of the entosternal piece. There is more or less thickening of this part in all the species of *Testudo*, and the amount of it is very variable in different individuals of the same species; but there is nothing approaching the same degree of contraction in reference to the thickness, nor aught like a developed keel, in any of the existing land tortoises which we have either had an opportunity of examining, or seen described in systematic works on the tribe. The keel in the fossil is feebly shown in the young animal, but strongly marked in the adult. Conceiving that generic distinctions are only legitimate in the case of well-defined modifications affecting some of the leading characters in the organization of an animal, we do not consider ourselves warranted in attaching a higher systematic importance to the *Colossochelys* than as a subgenus of *Testudo*, which may technically be defined thus (the distinction resting mainly on the form of the sternum):—

Subgen. Colossochelys.

Testa solida, immobilis, sterno anticè in collum valdè incrassatum,

Digitized by Google

subtùs carinâ crassâ cuneiformi instructum, angustato. Testudo terrestris, staturâ et mole ingenti (inde nomen κολοσσὸς et χέλυς) sui tribus prodigium! Olim in Indiæ orientalis provinciis septentrionalibus degebat.

"*Colossochelys Atlas.*—The first fossil remains of this colossal tortoise were discovered by us in 1835 in the tertiary strata of the Sewalik Hills, or Sub-Himalayahs skirting the southern foot of the great Himalayah chain. They were found associated with the remains of four extinct species of Mastodon and Elephant, species of Rhinoceros, Hippopotamus, Horse, Anoplotherium, Camel, Giraffe, Sivatherium, and a vast number of other Mammalia, including four or five species of Quadrumana. The Sewalik fauna included also a great number of reptilian forms, such as crocodiles and land and freshwater tortoises. Some of the crocodiles belong to extinct species, but others appear to be absolutely identical with species now living in the rivers of India: we allude in particular to the *Crocodilus longirostris*, from the existing forms of which we have been unable to detect any difference in heads dug out of the Sewalik Hills. The same result applies to the existing *Emys tectum*, now a common species found in all parts of India. A very perfect fossil specimen, presenting the greater part of the evidence of the dermal scutes, is undistinguishable from the living forms, not varying more from these than they do among each other. Prof. Thomas Bell, the highest living authority on the family, after a rigid examination, confirms the result at which we had arrived, that there are no characters shown by the fossil to justify its separation from the living *Emys tectum*. There are other cases which appear to yield similar results, but the evidence has not yet been sufficiently examined to justify a confident affirmation of the identity at present.

"The remains of the *Colossochelys* were collected during a period of eight or nine years along a range of eighty miles of hilly country: they belong in consequence to a great number of different animals, varying in size and age. From the circumstances under which they are met with, in crushed fragments, contained in elevated strata which have undergone great disturbance, there is little room for hope that a perfect shell, or anything approaching a complete skeleton, will ever be found in the Sewalik Hills. It is to be mentioned, however, that remains of many of the animals associated with the *Colossochelys* in the Sewalik Hills have been discovered along the banks of the Irrawaddi in Ava, and in Perim Island in the Gulf of Cambay, showing that the same extinct fauna was formerly spread over the whole continent of India.

"This is not the place to enter upon the geological question of the age of the Sewalik strata; suffice it to say, that the general bearing of the evidence is that they belong to the newer tertiary period. But another question arises: 'Are there any indications as to when this gigantic tortoise became extinct? or are there grounds for entertaining the opinion that it may have descended to the human period?' Any *à-priori* improbability, that an animal so hugely disproportionate to existing species should have lived down to be a

Digitized by Google

contemporary with man, is destroyed by the fact that other species of Chelonians which were coeval with the *Colossochelys* in the same fauna, have reached to the present time; and what is true in this respect of one species in a tribe, may be equally true of every other placed under the same circumstances. We have as yet no direct evidence to the point, from remains dug out of recent alluvial deposits; nor is there any historical testimony confirming it; but there are traditions connected with the cosmogonic speculations of almost all Eastern nations having reference to a tortoise of such gigantic size, as to be associated in their fabulous accounts with the elephant. Was this tortoise a mere creature of the imagination, or was the idea of it drawn from a reality, like the *Colossochelys*?

"Without attempting to follow the tortoise tradition through all its ramifications, we may allude to the interesting fact of its existence even among the natives of America. The Iroquois Indians believed that there were originally, before the creation of the globe, six male beings in the air, but subject to mortality. There was no female among them to perpetuate their race; but learning that there was a being of this sort in heaven, one of them undertook the dangerous task of carrying her away. A bird (like the Garūda of Vishnoo or the Eagle of Jupiter) became the vehicle. He seduced the female by flattery and presents: she was turned out of heaven by the supreme deity, but was fortunately received upon the back of a tortoise, when the otter (an important agent in all the traditions of the American Indians) and the fishes disturbed the mud at the bottom of the ocean, and drawing it up round the tortoise formed a small island, which increasing gradually became the earth. We may trace this tradition to an Eastern source, from the circumstance that the female is said to have had two sons, one of whom slew the other; after which she had several children, from whom sprung the human race.

"In this fable we have no comparative data as to the size of the tortoise, but in the Pythagorean cosmogony the infant world is represented as having been placed on the back of *an elephant, which was sustained on a huge tortoise*. It is in the Hindoo accounts, however, that we find the fable most circumstantially told, and especially in what relates to the second Avatar of Vishnoo, when the ocean was churned by means of the mountain Mundar placed on the back of the king of the tortoises, and the serpent Asokee used for the churning-rope. Vishnoo was made to assume the form of the tortoise and sustain the created world on his back to make it stable. So completely has this fable been impressed on the faith of the country, that the Hindoos to this day even believe that the world rests on the back of a tortoise. Sir William Jones gives the following as a translation from the great lyric poet Jyadeva: 'The earth stands firm on thy immensely broad back, which grows larger from the callus occasioned by bearing that vast burden. O Cesava! assuming the body of a tortoise, be victorious! Oh! Hurry, Lord of the Universe!'

"The next occasion in Indian mythology where the tortoise figures prominently is in the narratives of the feats of the bird-demigod 'Garūda,' the carrier of Vishnoo. After stating the circumstances of

Digitized by Google

his birth, and the disputes between his mother Vinūta and 'Kudroo,' the mother of the serpent, it is mentioned that he was sent on an expedition to bring 'Chundra' the moon, from whom the serpents were to derive the water of immortality. While pursuing his journey, amidst strange adventures, Garūda met his father Kŭshgŭfa, who directed him to 'appease his hunger at a certain lake, where *an elephant and tortoise were fighting*. The body of the tortoise was eighty miles long—the elephant's 160. Garūda with one claw seized the elephant—with the other the tortoise, and perched with them on a tree 800 miles high.' He is then, after sundry adventures, stated to have fled to a mountain on an uninhabited country, and finished his repast on the tortoise and elephant.

"In these three instances, taken from Pythagoras and the Hindoo mythology, we have reference to a gigantic form of tortoise, comparable in size with the elephant. Hence the question arises, are we to consider the idea as a mere fiction of the imagination, like the Minotaur and the chlmæra, the griffin, the dragon, and the cartazonon, &c., or as founded on some justifying reality? The Greek and Persian monsters are composed of fanciful and wild combinations of different portions of known animals into impossible forms, and, as Cuvier fitly remarks, they are merely the progeny of uncurbed imagination; but in the Indian cosmogonic forms we may trace an image of congruity through the cloud of exaggeration with which they are invested. We have the elephant, then as at present, the largest of land animals, a fit supporter of the infant world; in the serpent Asokee, used at the churning of the ocean, we may trace a representative of the gigantic Indian python; and in the bird-god Garūda, with all his attributes, we may detect the gigantic crane of India (*Ciconia gigantea*) as supplying the origin. In like manner, the *Colossochelys* would supply a consistent representative of the tortoise that sustained the elephant and the world together. But if we are to suppose that the mythological notion of the tortoise was derived, as a symbol of strength, from some one of those small species which are now known to exist in India, this congruity of ideas, this harmony of representation would be at once violated; it would be as legitimate to talk of a rat or a mouse contending with an elephant, as of any known Indian tortoise to do the same in the case of the fable of Garūda. The fancy would scout the image as incongruous, and the weight even of mythology would not be strong enough to enforce it on the faith of the most superstitious epoch of the human race.

"But the indications of mythological tradition are in every case vague and uncertain, and in the present instance we would not lay undue weight on the tendencies of such as concern the tortoise. We have entered so much at length on them on this occasion, from the important bearing which the point has on a very remarkable matter of early belief entertained by a large portion of the human race. The result at which we have arrived is, that there are fair grounds for entertaining the belief as probable that the *Colossochelys Atlas* may have lived down to an early period of the human epoch and become extinct since:—1st, from the fact that other Chelonian species and

Digitized by Google

crocodiles, contemporaries of the *Colossochelys* in the Sewalik fauna, have survived; 2nd, from the indications of mythology in regard to a gigantic species of tortoise in India.

"Some of the bones were analysed with great care by Mr. Middleton, and yielded a large proportion of fluorine, the constituents being,—

Phosphate of lime	64·95
Carbonate of lime	22·36
Fluoride of calcium	11·68
Oxide of iron	1·00
A trace of chloride of soda.	
	99·99

"Other Sewalik fossil bones were at the same time subjected to analysis, such as the *Mastodon elephantoides*, *Camelus sivalensis*, Horse, Ruminants, &c., and the whole of them yielded similar results, with a proportion of fluoride of calcium varying from 9 to 11 per cent. This is much above the usual quantity found in fossil bones; the utmost that has been met with having been in bones of the Anoplotherium from the Paris basin, 14 per cent."

Digitized by Google

May 28, 1844.

William Horton Lloyd, Esq., in the Chair.

The following extracts were read from a letter from Robert Templeton, Esq., M.D., Corr. Mem., Royal Artillery, Colombo, Ceylon :—

"You will be glad to learn that I yesterday heard of a new monkey, which I imagine, from the description, must belong to the same genus as the Wanderoo. Every day brings some novelty to my notice, but I regret to say that although I have many promises from officers at out-stations, I do not receive specimens as fast as I could wish.

"You may announce to the Society that I had an accouchement in my house of a *Loris*, the affair occupying about half an hour, at the end of which a little naked object was fully in the world, about two inches long, like a young mouse, perfectly without covering, a large head, attenuate body, and excessively slender legs; the face and eyes were proportionally much smaller than in the older animal. It clung to the mother so tenaciously, that I believe it would have almost parted with its legs rather than let go its hold. The mother died on the following night and the young one immediately after, so that I had little time for observing them. You will perceive from the half-finished sketch I enclose that it is not at all entitled to the usual appellation of *dog-like*, which has been derived I presume from the drawings having hitherto been made from stuffed specimens.

"The loss of the 'Memnon' has been a matter of serious concern to me, as she carried a paper which cost much trouble, and of which I foolishly destroyed the copy; unfortunately, since that time I have had neither leisure nor specimens from which to work out another. In the meantime I wish you to inform the Society that there is found in the alpine regions of Ceylon during the rainy season enormous worms, reaching from twenty to forty inches in length, and about an inch or $1\frac{1}{2}$ inch in thickness. From the size and colour I have adopted the name of MEGASCOLEX CÆRULEUS.

"The body is composed of 270 rings, the sexual organs occupying the 16th, 17th and 18th; between this part and the head it is somewhat ventricose, but at the 17th ring there is a decided narrowing. Each ring is dilated in the middle of its length into a ridge, which carries on it, except in the mesial line of the back, minute conical mammillæ, 100 in number, each surmounted with a minute bristle, arched backwards; the dermoid covering is striated in opposite directions diagonally, to admit of the contractions of the muscles beneath; dorsally the depressed parts of the rings are deep bright blue, which becomes gradually narrowed as it descends the sides, and ter-

Digitized by Google

minates abruptly, leaving the inferior parts orange-yellow, but the absolute ventral part is pure yellow.

"The intestinal canal is very large, extending to within an eighth of an inch of the surface, and supported on all sides by a series of membranous partitions, attached externally to the edge of each ring. The walls of the intestine are composed of strong but fine membrane, which is separable into layers, but is without any distinct appearance of fibres; exterior to this are the muscular bundles, which serve for the progressive movements of the animal; they are compound, whitish, shining fibres, collected into longitudinal fasciculi, separated by tolerably strong cellular membrane, and are deficient, as far as I am aware, only in one position.

"In all works which I have examined it is stated (I think originally by Sir Everard Home) that the respiration of this tribe is carried on through a system of pores on the sides of the animal, as in the leech. This is a complete mistake; the facts are as follows:—Along the middle line of the back, as I have before noticed, the mammillary projections are deficient for a space about one-tenth of an inch broad, and in the interval between each ring in this situation is a small transverse narrow ridge, in the centre of which, and occupying its whole breadth, is the orifice of the respiratory apparatus, a narrow oval; they are first visible in the interval between the 14th and 15th ring, and terminate between the 17th and 18th from the tail, being most developed at half the length of the animal, or rather a little nearer the tail. The artery runs along the whole back of the worm, sending off lateral branches at the position of the septa, and at the place where the respiratory orifices open externally it forms the inferior boundary of a little quadrangular space, shut up on all sides by cellular membrane, so as to present the appearance of a little sac like a reticule, with a rectangular bottom; the sides of this space are formed as follows: the muscle becomes deficient there, taking a new attachment, and having a new origin beyond the orifice, the profile being arched rather abruptly, and thus we have an anterior and posterior wall; the lateral are formed by the muscular bundles of either side, and the shape must necessarily be more or less quadrangular, in fact nearly square: the membrane forming the immediate walls of the sac is so fine and so loose that I failed in all attempts to trace its form inside, but I satisfied myself of there being a distinct cavity, by introducing from the outside a small blunted wire, with which I gently pressed the sides; it seemed however not so extensive anteriorly, posteriorly, and at the angles, as I should have supposed from the form of the more solid supports outside.

"The rest of the anatomy of this animal I must leave until I can procure more specimens and have more leisure.

"When I first got the *Megascolex* I was sure I had obtained an animal which would break down the old division of *Abranches setigères* and *A. sans soies*, for the bristles are so minute that I did not in the first instance perceive them. As to its being a true *Lumbricus* there could be no doubt. I was much gratified when I discovered that the separation of the tribes, founded on a character which in-

Digitized by Google

dicates their respective terrestrial and aquatic habits, was correct, and gave due credit to its proposer."

"Monograph of the genus *Myadora*, a small group of Acephalous Mollusks of the family *Myaria*," by Lovell Reeve, Esq.

Genus Myadora, Gray.

Testa trigono-ovata, inæquivalvis, valvâ sinistrâ plus minusve concavâ, dextrâ planâ, rarò concaviusculâ; inæquilateralis, latere postico rotundato, antico leviter flexuoso, coarctato, infernè plerumque truncato, depressione plano-concavâ sub umbones. Cardo: dentibus in valvâ dextrâ duobus lateralibus, elongatis, rudibus, ab umbone divergentibus, quorum posticus planus, subobsoletus; in valvâ sinistrâ projecturis sulcatis duabus lateralibus, dentes recipientibus. Ligamentum internum in foved trigonâ centrali inter dentes insertum, appendice testaceâ concavâ sæpè internè protectum. Valvæ intus margaritaceæ, pallii impressione musculari anticè sinuatâ.

The genus *Myadora*, introduced by Mr. Gray in his account of the 'Shells of Molluscous Animals,' in the 'Synopsis of the Contents of the British Museum,' is one that cannot fail to be appreciated; nothing indeed can more fully demonstrate the necessity for a new generic allotment of certain species, than the circumstance of their having been transported at different times from one genus to another by the same author*.

The *Myadoræ* partake of the characters of *Anatina* and *Pandora*, and as they have been referred at times to both of those genera, it is important to describe with some minuteness the differences which entitle them to generic distinction. In *Anatina* the hinge is composed of two hollow spoon-shaped processes, containing the ligament, protected in some species by a moveable testaceous clavicle, which crosses the dorsal axis of the shell on the posterior side, as in the *Anatina truncata*, for example, a species now commonly obtained with the accessory hinge-piece complete.

In *Pandora*, which is too flat and compressed a shell to admit any structure like the spoon-shaped processes of *Anatina*, the ligament is lodged in a cicatrix, protected on the posterior side by a single central oblong tooth in the right valve only; the clavicle is dispensed with, but the loss is in a degree supplied by a thickening and folding over of the dorsal margin.

In *Myadora*, which being a thicker shell requires a hinge of more

* "In an Appendix to a Catalogue of Shells collected in the Australian and Polynesian group, by Mr. S. Stutchbury," says Sowerby, in his account of the genus *Pandora*, 'Species Conchyliorum,' Part 1, "I have described, under the name of *Pandora brevis*, a shell (*Myadora brevis*, nobis) which I am now convinced is rather an *Anatina*, inasmuch as its flat valve is destitute of the blunt tooth which characterizes the *Pandoræ*; it differs also from them in having a sinus in the muscular impression of the mantle, and in being possessed of a small testaceous appendage attached to the ligament." This shell it will be seen however has not the spoon-shaped processes of *Anatina*.

Digitized by Google

solid structure, the peculiarities above noted in *Anatina* and *Pandora*, the clavicle of the former, the folded margin of the latter, are united in the following modified condition. The dorsal margin of the right valve of *Myadora* becomes consolidated into a tooth-like ledge or projection, diverging from, on each side, the umbo, fitting into grooved projections of similar construction in the left valve; and by the diverging of these tooth-like projections a compact triangular cavity is obtained for the insertion of the ligament, which in some species is walled in, as it were, internally, not laterally as in *Anatina*, by a moveable testaceous clavicle forming an angle with the diverging ledges.

The clavicles of *Anatina* and *Myadora*, it may be observed, are very differently situated with respect to the ligament, the one being a side appendage, extending across the dorsal axis of the shell; the other an internal appendage, parallel as it were to the dorsal axis.

Of the following ten species, which I propose to refer to this genus, the grand type, *Myadora striata*, is an inhabitant of Port Nicholson, New Zealand, and the remainder are for the most part collected by Mr. Cuming in the Philippine Islands.

1. Myadora crassa. *Anatina crassa*, Stutchbury, Zool. Journ. vol. v. p. 100; Tab. Supp. xliii. f. 5 and 6.
Conch. Iconica, *Myadora*, pl. 1. f. 1.
Hab. —— ?
This short rounded species is the only one at present known in which the right valve is concave.

2. Myadora trigona. *Myad. testâ trigonâ, valdè plano-depressâ, usque marginem concentricè striatâ, striis prominentibus, quasi carinulatis, prope marginem anticam undatis; umbonibus acutissimè mucronato-elevatis.*
Conch. Iconica, *Myadora*, pl. 1. f. 2.
Hab. Catanauan, province of Tayabas, island of Luzon.
Four odd valves only of this interesting little species were collected by Mr. Cuming at the above-mentioned locality.

3. Myadora plana. *Myad. testâ trigono-oblongâ, anticè subtruncatâ, planissimâ, concentricè striatâ, striis subdistantibus, valvæ sinistræ prominentioribus.*
Conch. Iconica, *Myadora*, pl. 1. f. 3. *a* and *b*.
Hab. Baclayon, island of Bohol, Philippines (found in sandy mud at the depth of seventeen fathoms); Cuming.
This species is chiefly distinguished from its congeners, the *Myadoræ tincta* and *trigona*, by its more oblong shape.

4. Myadora ovata. *Myad. testâ ovatâ, subtriangulari, valvâ sinistrâ ventricoso-concavâ, dextrâ leviter convexâ, concentricè striatâ, striis elevatis, prope marginem anticam subobsoletis, valvæ dextræ numerosis, confertis, sinistræ prominentibus, subdistantibus, umbonibus depresso-incurvis.*
Conch. Iconica, *Myadora*, pl. 1. f. 4.

Digitized by Google

Hab. San Nicolas, island of Zebu, Philippines (found in sandy mud at the depth of six fathoms); Cuming.

This species exhibits a greater disparity in the sculpture of the valves than any other, the striæ of the right valve being very fine and close-set, whilst those of the left are almost keel-like and comparatively distant.

5. MYADORA TINCTA. *Myad. testâ trigonâ, anticè subtruncatâ, usque marginem concentricè striatâ, striis elevatis, prominentibus; fuscescente tinctâ.*

Conch. Iconica, *Myadora*, pl. 1. f. 5.

Hab. Island of Ticao, Philippines (found in coral sand at the depth of six fathoms); Cuming.

The *Myadora tincta* scarcely differs from the *Myadora plana*, except in being of a less oblong and more triangular form.

6. MYADORA STRIATA, Gray, MSS. British Museum; *Pandora striata*, Deshayes.

Conch. Iconica, *Myadora*, pl. 1. f. 6. *a*, *b*, and *c*.

Hab. Port Nicholson, New Zealand; Swainson.

This is the grand type of the genus, and of much larger size than any other species.

7. MYADORA BREVIS. *Anatina brevis*, Stutchbury, Zool. Journ. vol. v. p. 99; Tab. Supp. xliii. f. 1 and 2.

Conch. Iconica, *Myadora*, pl. 1. f. 7.

This is a very interesting form, and the striæ of the left valve are peculiarly wrinkled.

8. MYADORA OBLONGA. *Myad. testâ trigono-oblongâ, anticè latissimè truncatâ, concentricè striatâ, striis elevatis, regularibus, prope marginem anticam angulatis.*

Conch. Iconica, *Myadora*, pl. 1. f. 8.

Hab. Island of Mindoro, Philippines; Cuming.

The anterior side of this species is the most broadly truncated of any.

9. MYADORA CURVATA. *Myad. testâ curvato-oblongâ, valvâ dextrâ convexiusculâ, anticè subindistinctè flexuoso-costatâ, concentricè striatâ, striis elevatis, angustis, regularibus.*

Conch. Iconica, *Myadora*, pl. 1. f. 9.

Hab. Island of Corrigidor, Philippines; Cuming.

This species differs also in form rather than in variety of sculpture.

10. MYADORA PANDORÆFORMIS. *Anatina Pandoræformis*, Stutchbury, Zool. Journ. vol. v. p. 99; Tab. Supp. xliii. f. 3 and 4.

Conch. Iconica, *Myadora*, pl. 1. f. 10.

The *Myadoræ striata*, *brevis*, and *Pandoræformis* are the only species of the genus at present known to have the clavicle.

The Secretary called the attention of the Meeting to a specimen of the Two-toed Sloth, *Bradypus didactylus*, which was now in the Gardens, and requested Mr. Ball, Secretary to the Royal Zoological

Digitized by Google

Society of Ireland, to communicate such particulars connected with the habits and manners of this curious animal as had fallen under his observation.

Mr. Ball regretted that it was out of his power to state the exact locality from which the animal had been obtained; however, he had reason to believe that it was brought from Demerara.

Its general food was sea-biscuit and water; of fruit it partook sparingly, but he had observed it pick the young buds of the hawthorn flowers and eat them with great avidity.

While in the Zoological Gardens at Dublin its favourite position was where it was supported partly by the branch to which it clung, and partly by an adjoining branch on which its back could rest.

In lapping water, the great length to which its tongue was protruded was very remarkable, thereby showing its affinity to the other *Edentata* of South America.

Digitized by Google

June 11, 1844.

George Gulliver, Esq., in the Chair.

Letters were read from William Willshire, Esq., Corr. Mem., accompanying a specimen of the Aoudad, *Ovis Tragelaphus*, from Mogadore, which he presented to the Society; and from the Rev. R. T. Lowe, Corr. Mem., presenting specimens of Fish from Jamaica.

Also a communication from H. Bourchier, Esq., Corr. Mem., Malta, relating to two Ostriches presented to the Society by Colonel Warrington.

"On the Blood-corpuscles of the Two-toed Sloth, *Bradypus didactylus*, Linn.," by George Gulliver, F.R.S.

From an observation which I have lately made, it results that the Two-toed Sloth is one of the very few animals that has blood-discs considerably larger than those of Man.

The following measurements of the blood-discs of the Sloth are given in vulgar fractions of an English inch:—

1-3200	Common sizes.
1-3000	
1-2888	
1-2823	
1-2769	
1-2664	
1-2583	
1-4266	Extremes.
1-2286	
1-2865	Average.

M. Mandl* discovered that the blood-corpuscles of the Elephant are the largest at present known belonging to the Mammalia, and I subsequently found that those of the Capybara were, as far as we then knew, next in size, as noticed in my Appendix to Gerber's Anatomy, pages 5, 8, and 50.

But it now appears that the blood-corpuscles of the Sloth are larger than those of the Capybara, and, among mammiferous animals, second only in magnitude to the corpuscles of the Elephant.

For the sake of comparison, some of my measurements of the average size of the largest blood-discs of Mammalia are here set down in the order of the magnitude of the discs, and in vulgar fractions of an English inch.

* Anatomie Microscopique, Paris 1838, Prem. Liv. p. 17. M. Mandl's observation refers to the blood-corpuscles of the African elephant; it was those of the Asiatic species that I examined.

Digitized by Google

Elephas Indicus, Cuv.	1-2745
Bradypus didactylus, Linn.	1-2865
Balæna Boops, Auct.	1-3099
Hydrochærus Capybara, Erxl.	1-3216
Phoca vitulina, Linn.	1-3281
Dasypus villosus, Desm.	1-3315
Myopotamus Coypus, Desm.	1-3355
Pithecus Satyrus, Geoff.	1-3383
Dasypus sex-cinctus, Auct.	1-3457

Numerous other measurements are appended to the English version of Gerber's Anatomy.

It has been said that the blood-corpuscles are larger in omnivorous than in herbivorous and carnivorous animals. To the facts which I have elsewhere* shown to be at variance with this opinion, it may be added that the oviparous Vertebrata, whatever may be the nature of their food, have larger blood-corpuscles than Mammalia, and that the size of the blood-corpuscles of many carnivorous birds exceeds that of the corpuscles of several of the omnivorous species.

Finally, the Two-toed Sloth, which is a purely vegetable feeder, has, excepting the Elephant, the largest blood-corpuscles hitherto observed in any mammiferous animal.

"Mr. Hinds' resumed description of new Shells, from the cabinets of Sir E. Belcher and H. Cuming, Esq."

RINGICULA, Deshayes.

RINGICULA GRANDINOSA. *Rin. testâ ovatâ, retusâ, lævigatâ, politâ; anfractibus rotundatis, ultimo magno, subquadrato, rotundato; columellâ supernè valdè callosâ, denticulatâ.* Axis $1\frac{8}{3}$ lin.

Hab. Bais, island of Negros; in six fathoms, coarse sand: Cagayan, island of Mindanao; in twenty-five fathoms, sandy mud: Catbalonga, island of Samar; in ten to thirty fathoms, mud: Sorsogon, island of Luzon:—all in the Philippines.

Cab. Cuming.

These little shells resemble each other very closely, and it is only by close attention to minute characters and the proportion and form of the last whorl that they can be satisfactorily discriminated. The present species is perfectly smooth, and the last whorl is large, of a squarish form, and full and rounded. The upper portion of the aperture is strongly denticulated.

RINGICULA PROPINQUANS. *Rin. testâ ovatâ, retusâ, striatâ, nitidâ; anfractibus rotundatis, ultimo magno valdè rotundato, concinnè striato.* Axis $1\frac{1}{3}$ lin.

Hab. Sual, Philippines; in five to seven fathoms, sandy mud.

Cab. Cuming.

Here the last whorl is not so square in shape, but very full and rounded, and is neatly striated in a very regular manner, and the spire is short. Till the light is thrown properly on them, these striæ

* Appendix to Gerber's Anatomy, p. 4–5.

Digitized by Google

are not very evident, but once discovered they will be found constant.

RINGICULA CARON. *Rin. testâ ovatâ, acuminatâ, striatâ, nitidâ; anfractibus rotundatis, ultimo subtransverso, rotundato, distanter striato; spirâ exsertâ; aperturâ subabbreviatâ; labro corrugato.* Axis 1⅜ lin.

Hab. Straits of Malacca; in seventeen fathoms, mud.

Cab. Belcher.

The greatest breadth of the last whorl is probably in the transverse direction, and it is grooved with striæ placed at regular distances from each other. The spire also is proportionately lengthened.

RINGICULA EXSERTA. *Rin. testâ ovatâ, acuminatâ, lævigatâ, politâ; anfractibus rotundatis, lævigatis; spirâ elongatâ; labro ponè valdè incrassato.* Axis 1⅜ lin.

Hab. Camiguing; in forty fathoms, sandy mud: Sorsogon, island of Luzon; in six fathoms, coarse sand;—both in the Philippines.

Cab. Cuming.

Compared with *R. grandinosa*, the last whorl is small, but agrees in being quite smooth and round; the spire is elongated, as in *R. caron*, and the labrum is even rather more reflected than is usual.

RINGICULA AUSTRALIS. *Rin. testâ ovatâ, acuminatâ, lævigatâ, politâ; anfractibus rotundatis, penultimo sensim minore; spirâ elongatâ, infrà suturam fasciâ subalbidâ cinctâ.* Axis 1½ lin.

Hab. Port Lincoln, Australia.

Cab. Metcalfe.

The only specimen before me has not attained its full adult age. In its characters it is rather intermediate; the spire is not so prominently produced, and the penultimate whorl is more than usually developed, so as to be more intermediate in size between the others. All these species are of one uniform glassy semiopake colour, in some individuals being more glassy, in others more opake.

NEÆRA, Gray.

NEÆRA LYRATA. *N. testâ suborbiculari, tenui, fragili, diaphanâ, liris transversis sulcatâ, anticè rotundatâ; rostro retusissimo; margine ventrali convexâ.* Long. 4½; lat. 2; alt. 3⅛ lin.

Hab. Basay, island of Samar, Philippines; in from five to seven fathoms, sandy mud.

Cab. Cuming.

This species is to *Neæra* exactly what *Mactra elegans* is among that group, the sculpture and outline of the shells being so very similar. This is of course comparatively a very miniature shell.

NEÆRA TENUIS. *N. testâ ovali, fragili, diaphanâ, striis concentricis incrementis rugosâ, anticè rotundatâ, posticè retusè rostratâ; margine ventrali anticè subemarginatâ.* Long. 4½; lat. 2; alt. 3⅛ lin.

Hab. Bais, island of Negros, Philippines; in seven fathoms, coral sand.

Cab. Cuming.

Digitized by Google

Less ventricose than is usual with the species of this group, posteriorly gradually attenuated into a short blunt beak, and on the ventral margin slightly emarginate.

NEERA COCHLEARIS. *N. testâ majusculâ, oblongâ, albidâ, striatâ, prope umbones elevatiusculâ, anticè rotundatâ, posticè attenuatè nasutâ, liris angustis, versus umbones respectantibus; margine ventrali valdè rotundato, posticè emarginato.* Long. 11½; alt. 8 lin.

Hab. Bais, island of Negros, Philippines; in seven fathoms, coral sand.

Cab. Cuming.

The description is drawn up from a single valve, but this is so large, and the characters so marked, as to render its future identity comparatively easy.

Digitized by Google

June 25, 1844.

William Horton Lloyd, Esq., in the Chair.

"Description of some new species of Birds brought by Mr. L. Fraser from Western Africa," by H. E. Strickland, Esq., M.A.

Mr. Fraser has placed in my hands for examination and description a portion of the ornithological collection made by him during the Niger expedition, and I now present the names and characters of the new species. Mr. Fraser's researches in Western Africa have made us acquainted with several new and interesting species of birds, and as he was only able to bring home very few, and in some cases only one specimen of each species, it would be very desirable that full descriptions, illustrated by figures, of these ornithological rarities should be made public, especially as it may be long before the pestilential shores of Western Africa are again explored by naturalists.

HIRUNDINIDÆ, CYPSELINÆ.

Cypselus parvus, Licht., Verz. Doubl. p. 58.

A specimen of this bird was brought by Mr. Fraser from Acra; it is probably the smallest species of the genus, the total length being only 6 inches, wing 4¾ inches, medial rectrices 1¾ inch, external 3¼ inches. Plumage uniform mouse-colour, chin whitish.

Acanthylis bicolor (Gray); *Chætura bicolor*, Gray, Zool. Misc. p. 7.

A specimen of this elegant little species was obtained in May 1842 at Fernando Po, where it was very common.

TURDIDÆ, MALURINÆ.

PRINIA OLIVACEA, Strickl. *P. suprà viridi-olivacea, remigibus fuscis, olivaceo limbatis, caudâ cuneatâ, rectricibus duobus intermediis fuscis, lateralibus albis, extùs fusco marginatis, extimo toto albo; mento corporeque toto inferno albido, pallidè flavo lavato. Rostrum pedesque fuscescentes.*

The aspect of this bird is that of a *Phylloscopus*, but the beak is longer, more depressed at the base, the culmen carinated, the wings short and rounded, the first quill subspurious, the fourth longest; tail much graduated, rectrices narrow; tarsi moderately long, acrotarsia scutate, toes slender, the outer longer than the inner. These characters induce me to class the bird provisionally in the genus *Prinia*.

Total length 4½ inches; beak to gape 6 lines, to front 5½ lines, breadth 2 lines, height 1½ line; wing 1¾ inch; medial rectrices 1 inch 10 lines, external 1 inch 1 line; tarsus 7½ lines, middle toe 5½ lines, hind ditto 5 lines.

Hab. Fernando Po; June 1842.

Digitized by Google

PRINIA ICTERICA, Strickl. *P. suprà flavo-olivacea, loris, superciliis, genis, margine alarum, tibiis, caudæque tectricibus infernis lætè flavis, mento, guld, pectore et abdomine albidis, pallidè isabellino lavatis, hypochondriis flavo-olivaceis, rostro nigro, pedibus rubris.*

This bird appears to belong to the same group as the last, but the beak is rather more depressed, the tail shorter and less cuneate, and the tarsi rather longer. In all other respects their structures correspond. They both have short rictal bristles and the nostrils are large, oblong, and situated in a large membranous depression of the beak. Possibly they may hereafter form a distinct genus of *Malurinæ*, distinguished chiefly by the depressed form of the beak.

Total length 3¾ inches; beak to gape 7½ lines, to front 6 lines, breadth 2½ lines, height 1½ line; wing 1 inch 11 lines; medial rectrices 1¼ inch, external 1 inch; tarsus 9½ lines, middle toe 6½ lines, hind ditto 5½ lines.

Hab. Fernando Po; June.

Mr. Fraser adds: "Irides light hazel; note *tweet, tweet, tweet*, hopping about the topmost branches of a small tree like a wren." In a sketch of this bird by Mr. Fraser the tail is erect, as in *Troglodytes*.

TURDINÆ.

COSSYPHA POENSIS, Strickl. *C. corpore suprà fuliginoso-fusco, remigibus fuscis, omnibus* (1â *et* 2â *exceptis*) *basin versùs rufo-ferrugineis, sed scapis fuscis; rectricibus fuscis, tribus externis utrinque albo terminatis* (*qui color in rectricis extimæ pogonio externo obliquè versus basin producitur*), *corpore toto inferno ferrugineo, guld obscuriore. Rostrum atrum, pedes flavescentes.*

Seems to be a typical *Cossypha*, allied to *C. reclamator* (Vieill.), with which it agrees in all essential characters. The specimen above described is a male, and was procured at Clarence, Fernando Po.

Total length 7¾ inches; beak to gape 10 lines, to front 7 lines, breadth 4 lines, height 2½ lines; wing 4 inches 2 lines; medial rectrices 3½ inches, external 3 inches 4 lines; tarsus 1 inch, middle toe and claw 1 inch, hind ditto 8 lines, lateral toes equal.

Mr. Fraser adds that this bird "feeds on the ground; when sitting quiet in a naked bush it is with difficulty to be discovered. Irides hazel."

PYCNONOTINÆ.

ANDROPADUS LATIROSTRIS, Strickl. *A. corpore suprà olivaceo, remigibus fuscis, extùs viridi-olivascente, intùs albido, marginatis, rectricibus fusco-brunneis, olivaceo limbatis; corpore subtùs olivascente, lateribus menti, alæ tectricibus infernis, et abdomine medio stramineis. Rostrum corneum, marginibus pallidis, pedes ungues-que pallescentes. Rostrum depressum, tomiorum dentibus obliquis 6 vel 7 utrinque; illis maxillæ distinctis, mandibulæ subobsoletis.*

In this species the beak is considerably depressed and formed like that of a *Muscicapa*; the teeth of the upper mandible are distinct and regular, but disappear about the middle of the beak. The lower

Digitized by Google

mandible is also furnished with five or six serrations, but very low and indistinct. The wing is much rounded, the fifth quill being longest and the rest graduated. The colour and texture of plumage are much like that of the East Indian *Pycnonotus flavirictus*, Strickl. (Ann. Nat. Hist., June 1844.)

Total length 6¾ inches; beak to gape 11 lines, to front 7 lines; breadth 4 lines, height 2½ lines; wing 3¼ inches; medial rectrices 3 inches; external 2¾ inches; tarsus ¾ inch, middle toe and claw 8 lines, hind ditto 6 lines.

The above description is taken from a specimen marked "female." In two other specimens in which the sex is not indicated the dimensions and plumage are the same, but the yellow streak on each side of the chin is wanting, and the lower mandible wants the serrations, and exhibits only a small subterminal notch. These are probably younger individuals.

Hab. Fernando Po; June.

ANDROPADUS GRACILIROSTRIS, Strickl. *A. corpore toto suprà olivaceo, remigibus primariis fuscis, extùs olivascente, intùs pallidè ochraceo limbatis, corpore subtùs pallidè olivaceo-cinerascente, mento gulâque albidis, abdomine medio crissoque pallidè flavescentibus, alarum tectricibus infernis pallidè ochraceis. Rostrum pedesque corneo-fusci; rostrum longiusculum, turdinum, dentibus maxillæ duobus, mandibulæ nullis.*

This species differs from the former one in several points of structure; the beak is considerably narrower at the base and more slender, the upper mandible has only two dentations, with a faint trace of a third, and the lower mandible exhibits only a slight subterminal emargination. The wings also differ, being more pointed; the first quill is subspurious, and the second, third and fourth nearly equal, the third longest. These two species, however, agree in the structure of the tail and feet, and in the texture and almost the colour of the plumage, the rump-feathers being dense, long and downy, as in the true *Pycnonoti*. The specimen before me is a male; it exhibits two or three slender nuchal bristles, like those of *Pycnonotus* and *Criniger*, which are not traceable in *A. latirostris*.

Total length 7 inches; beak to gape 10 lines, to front 7 lines, breadth 3 lines, height 2½ lines; wing 3¼ inches; medial rectrices 3 inches 1 line, external 2 inches 11 lines; tarsus 9½ lines, middle toe and claw 9 lines, hind ditto 6 lines.

Hab. Fernando Po; June. "Irides white; a pretty songster."

MUSCICAPIDÆ, MUSCICAPINÆ.

MUSCICAPA FRASERI, Strickl. *M. capite, dorso alisque fuscis, ferrugineo tinctis, remigibus fuscis, primariis extùs basin versus obscurè ferrugineis, omnibus, 1â et 2â exceptis, pogoniis internis ad basin pallidè rufis, uropygio, caudæ tectricibus, corporeque toto inferno rufo-ferrugineis, guld pallidiore, rectricibus fuscis, 6 intermediis strictissimè, lateralibus largè, rufo terminatis, externo ferè omninò rufo. Rostrum latum, nigrum, pedes pallidè brunnei.*

Digitized by Google

The rufous colouring of the plumage reminds us of *Tchitrea*, Less. (*Muscipeta*, Auct.), but the beak is much shorter and more triangular than in that genus. In its general structure and proportions this bird appears to approach the restricted genus *Muscicapa* more closely than any other group. The form of the beak is almost exactly that of the *Muscicapa latirostris*, Sw., of India, and the legs are much shorter than is usual in terrestrial birds. Notwithstanding these characters, Mr. Fraser's notes state that this bird "feeds on the ground; has the motions and plump appearance of a robin." He adds that the irides are hazel, and that it is a beautiful songster.

The beak is strong, depressed, very broad, the sides straight when viewed from above, and the base furnished with bristles of moderate length. The first quill is subspurious, 1 inch long; the second is half an inch shorter than the third; the fourth is the longest. Tarsi short, acrotarsia and paratarsia entire; outer toe slightly longer than the inner one, its first phalanx attached to the middle toe; claws curved, compressed, sharp; tail rounded. The male and female are alike, except that in the specimen before me of the female the narrow rufous tip of the medial rectrices is wanting, and the dimensions are rather less than in the male.

Total length 7¼ inches; beak to gape 9 lines, to front 6 lines, height 2¼ lines, breadth at gape 6 lines; wing 3 inches 10 lines; medial rectrices 3¼ inches, external 3 inches 1 line; tarsus 10 lines, middle toe and claw 9 lines, hind ditto 7 lines.

Hab. Fernando Po.

I dedicate this species to Mr. Louis Fraser, naturalist to the Niger expedition, who succeeded in bringing home many interesting additions to zoological science, notwithstanding the difficulties and dangers by which he was surrounded.

Laniidæ, Laniinæ.

Tephrodornis ocreatus, Strickl. *T. capite suprà genisque fusco-atris, dorso toto alisque obscurè fusco-plumbeis, remigibus rectricibusque fusco-atris, extùs plumbeo limbatis, corpore toto inferno albo, gutturis pectorisque plumis cinereo strictè marginatis, alarum tectricibus infernis cinereis albo marginatis. Rostrum pedesque atri, acrotarsiis integris.*

This bird approaches sufficiently near to the Indian genus *Tephrodornis* to be classed with it, the only important structural differences being that the acrotarsia are entire and that the tail is slightly rounded. The beak resembles that of *T. Indica* (Gray), but is a trifle shorter; the nostrils are concealed by incumbent bristly feathers; the fourth, fifth and sixth quills are nearly equal, the first three graduated, and the outer toe longer than the inner.

Total length 6¾ inches; beak to gape 11 lines, to front 7 lines, breadth 3 lines, height 2½ lines; wing 3 inches 7 lines; medial rectrices 3 inches, external 2 inches 8 lines; tarsus 10 lines, middle toe 9 lines, hind ditto 7 lines.

Hab. Fernando Po; June. "Irides hazel, legs blue."

Digitized by Google

Mr. Gould laid upon the table a number of Skins of Animals and Birds, being part of a large collection which Mr. Gilbert had lately forwarded to him from Australia. Mr. Gould characterized the following species:—

MAMMALIA.

MACROPUS GRACILIS. *M. infrà incanescens et saturatè fuscus; colli lateribus rufescenti-fusco lavatis; genis, mento et guld fulvescente-albis, vellere molli, ad basin cinereo, exinde fusco, dein albo, apice nigro; pilis longis nigris crebrè interspersis.*

	feet	in.
Length from tip of nose to the tip of the tail ..	2	6
——— of tail	1	1
——— of tarsi and toes, including nails	0	5
——— of arm and hand, including nails	0	3¼
——— of face from tip of nose to base of ear..	0	3½
——— of ear	0	2¼

Face and all the upper surface of the body grizzled grey and dark brown, the grizzled appearance produced by each hair being greyish white near its tip; sides of the neck and the outer side of the limbs washed with reddish brown; margin of the anterior edge and the base of the posterior edge of the ear buffy white; line from the angle of the mouth dark brown; line along the side of the face, chin and throat buffy white; under surface buffy grey; tail clothed with short grizzled hairs, similar to the upper surface of the body, and with a line of black on the upper side at the apex for about one-third of its length; the fur, which is somewhat soft to the touch, is grey at the base, then brown, to which succeeds white, the points of the hairs being black; there are also numerous long black hairs dispersed over the surface of the body; feet grizzled grey and rufous.

This is a very elegantly formed little animal, and is intermediate in size between *Macropus lunatus* and *Macropus frænatus*.

HYPSIPRYMNUS PLATYOPS. *H. facie magnopere latâ; hâc, corporisque lateribus, fuscescente-cinereis; dorso rufescenti-fusco; facie, partibusque superioribus pilis longis, et flavido-albis inter vellus crebrè adspersis; corpore inferiore fulvescente-cinereo.*

	feet	in.
Length from tip of the nose to the extremity of the tail ..	1	7
——— of tail	0	7
——— of tarsi and toes, including nails	0	2⅝
——— of arm and hand, including the nails	0	2½
——— of face from tip of nose to base of ear	0	3
——— of ear	0	0⅞

Face extremely broad, and, with the sides of the body, brownish grey; back reddish brown; the whole of the face and upper surface beset with numerous long yellowish white hairs, offering a strong contrast to the darker colouring of the fur; all the under surface and limbs buffy grey; tail brown above, paler beneath.

'Mor-da,' aborigines of Western Australia.

The above is the description of a female received from Swan River.

Digitized by Google

PERAMELES ARENARIA. *P. vellere rigido et cinerascente-fusco, pilis longis nigris intermixto, his fasciam lateralem vix distinctam, notamque instar ephippii ad dorsum medium efficientibus; auribus ferrugineis ad basin, in medio saturatè fuscis, ad apicem cinerascente-fuscis; corpore inferiore fulvescente-albo.*

	inches.
Length from tip of nose to extremity of tail	14½
——— of tail	4¼
——— from tip of nose to base of ear	3¼
——— of hind-leg, tarsi and toes	2¼
——— of fore-leg	2¼
——— of ear	1⅝

The fur is harsh to the touch and of a greyish brown hue, interspersed with numerous long black hairs, which form a broad indistinct band down the flanks, immediately before the hind-legs, and a kind of saddle-like mark on the centre of the back; ears rather lengthened and of three colours—rusty red near the base, then dark brown, and the apex of a light greyish brown; sides of the muzzle and all the under surface buffy white; line along the upper surface of the tail dark brown, the remainder buffy white; outside of the fore-legs dark brownish grey; feet and claws buffy white.

HAPALOTIS LONGICAUDATA. *H. supernè pallidè arenaced, pilis longis, nigris, ad caput et dorsum cum vellere intermixtis; rostri lateribus, et abdomine albis; caudâ pilis brevibus nigris ad basin indutâ, apicem versùs nigris et elongatis; apice extremo albo vellere molli, adpresso et juxta cutem plumbeo.*

	inches.
Length from tip of nose to extremity of tail	16
——— of tail	9
——— from tip of nose to base of ear	1¾
——— of hind-leg, tarsi and toes	2
——— of fore-leg	1⅞
——— of ear	0⅞

All the upper surface and the outside of the limbs pale sandy, interspersed on the head and over the back with numerous fine black hairs, which, becoming longer on the lower part of the back and rump, give that part a dark or brown hue; ears naked and of a dark brown; sides of the muzzle, all the under surface and the inner surface of the limbs white; tail clothed with short dark brown hairs at the base, with lengthened black hairs tipped with white on the apical half of its length, the extreme tip being white; tarsi white; whiskers very long, fine, and black; the fur is close, very soft, and of a dark slaty grey at the base, both on the upper and under surface.

This species is considerably smaller than *Hapalotis albipes*, but has a much longer tail and longer hind-legs in proportion to the size of the body.

'Kor-tung' and 'Goota-was,' aborigines of Moore's River, Western Australia.

PHASCOGALE CALURUS. *Phasc. cinerea; subtùs pedibusque albis,*

Digitized by Google

indistinctissimè flavo-tinctis; caudâ corpore longiore, dimidio basali pilis brevibus, rufis, apicali pilis longis nigris obsitâ; auribus magnis ad basin pilis flavescentibus obsitis.

	inch.	lin.
Length from tip of nose to extremity of tail ..	10	6
——— of tail	5	6
——— from tip of nose to base of ear.....	1	3
——— of tarsi and toes	0	11
——— of ear.....	0	7½

This beautiful species was procured in the interior of Western Australia.

It is nearly allied to *P. penicillata*, but is of smaller size and has the tail less bushy; the portion covered with short hair is extended from the base nearly to the middle of the tail, and is remarkable for its brilliant rusty-red colour; on the apical half of the tail the hairs are long, being on an average about half an inch in length; all the under side is black, very nearly to the root. The fur is soft and moderately long, and its general colour is ashy grey externally, but grey next the skin; the under parts of the body are white, tinted with cream-colour, and this last-mentioned tint is very distinct on the sides of the body; the eye is encircled by a narrow black line, and there is a blackish patch in front of the eye. The ears are large and very sparingly clothed for the most part with very minute dusky hairs, but at the base, both externally and internally, are some longish yellow hairs.

PHASCOGALE CRASSICAUDATA. *Phasc. suprà cinerea flavo-tincta; corpore subtùs, pedibusque albis; auribus mediocris, externè maculâ nigrâ ornatis; caudâ brevi crassâ.*

	inch.	lin.
Length from tip of nose to extremity of tail ..	5	7
——— of tail	2	1
——— of ear	0	5½
——— tarsi and toes	0	7

Hab. Western Australia.

This species is about the size of the common mouse, and is not unlike the *Mus sylvaticus* in its colouring; above grey with a wash of yellow, and on the sides of the body distinctly tinted with yellow; under parts and feet pure white; tail much swollen, especially in the middle, and clothed throughout with very minute pale hairs; ears clothed with pale hairs, but with a largish black spot externally; eyes encircled with black hairs; fur moderately long and soft.

AVES.

IERACIDEA OCCIDENTALIS. *Ier. vertice et corpore superiore ferrugineo-fuscis; singulis plumis strigâ centrali nigrâ angustè notatis; caudâ fusco multi-fasciatâ; corpore subtùs albo plumis lineâ fuscâ angustâ notatis.*

Crown of the head, back and scapularies rusty brown, with a narrow stripe of black down the centre; rump deep rusty brown, crossed

Digitized by Google

by broad bands of dark brown, the tip of each feather buffy white; wings very dark brown; the inner webs of the primaries with a series of large spots, assuming the form of bars, of a deep rusty brown near the shaft and fading into buffy white on the margin; wing-coverts tipped with rusty red; spurious wing with a row of rusty red spots on either side of the shaft; tail dark brown, crossed by numerous broad irregular bars of rusty red, and tipped with pale buff; ear-coverts and a stripe running down from the angle of the lower mandible dark brown; chin, all the under surface, and a broad band which nearly encircles the neck, white, with a fine line of dark brown down the centre; thighs deep rust-red, each feather with a line of black down the centre and tipped with buffy white; cere very light greenish flesh-colour; irides wood-brown; space round the eye pale yellow, becoming brighter near the eye; base of the upper mandible, the under mandible and gape, very light horn-colour; tip of the upper mandible black.

Total length, 16 inches; bill, $1\frac{1}{4}$; wing, $12\frac{1}{2}$; tail, $7\frac{3}{4}$; tarsi, $2\frac{1}{2}$.

Hab. Western Australia.

ÆGOTHELES LEUCOGASTER. *Æ. quoad colorem* Æ. Nov. Hollandiæ *consimilis, at grandior, rostro longiore, et abdomine albo.*

Head black; crown, lunar-shaped mark at the back of the head, and a collar surrounding the neck, black, freckled with grey in the centre of each feather; back freckled black and white; wings brown, crossed by numerous bands of lighter brown, freckled with dark brown; primaries margined externally with buff, interrupted with blotchings of dark brown; tail dark brown, crossed by numerous broad irregular bands of reddish buff, freckled with dark brown; ear-coverts straw-white; chin, abdomen and under tail-coverts white; breast, sides of the neck, and a narrow collar surrounding the back of the neck, white, crossed by numerous narrow freckled bars of black; irides dark brown; upper mandible dark olive-brown, lower white, with a black tip; legs pale yellow, claws black.

Total length, $9\frac{1}{2}$ inches; bill, 1; wing, $5\frac{3}{4}$; tail, 5; tarsi, 1.

Hab. Port Essington.

MALURUS PULCHERRIMUS. *Mal.* Mas: *vertice, et fasciâ dorsali splendidè violaceo-cæruleis; orbitis et plumis auricularibus ex æruginc cæruleis; gulâ indico-cæruleâ, nigro subtùs indistinctè marginatâ; plumis scapularibus castaneis; loris, nuchâ, et dorso imo holoserico-nigris.* Fœm.: *fusca, subtùs pallidior, orbitis rubidè fuscis.*

Crown of the head and a broad band across the centre of the back rich glossy violet-blue; space surrounding the eye and the ear-coverts verditer-blue; throat intense indigo-blue, bounded below by an indistinct band of black; lores, collar surrounding the back of the neck, and the lower part of the back, deep velvety black; scapularies chestnut; wings brown; tail dull greenish blue, indistinctly barred with a darker tint and slightly tipped with white; abdomen and under tail-coverts white; bill and feet black; irides dark brown.

Digitized by Google

Female dull brown, paler beneath; tail-feathers like those of the male, but less bright; bill and space round the eye reddish brown.

Remarks.—Very similar in its markings and general contour to *M. Lamberti*; it may however be always distinguished from that species by its larger size and by the deep indigo-blue colour of the throat and chest, which parts are black in *M. Lamberti*.

Total length, $5\frac{1}{4}$ inches; bill, $\frac{9}{16}$; wing, 2; tail, $3\frac{1}{4}$; tarsi, $\frac{15}{16}$.

Hab. Western Australia.

PACHYCEPHALA GILBERTII. *Pach.* Mas: *colore saturatè olivacco-fusco; capite plumbeo; loris nigris; gulâ ferrugineâ; humeris subtùs, abdomine medio, crissoque arenaceis.* Fœm. *differt, loris non nigris, neque gulâ ferrugineâ.*

The plumage dark greyish olive-brown; the head dark slate-grey, and the breast of a lighter grey; the lores black; throat rust-red; under surface of the shoulder, centre of the abdomen and under tail-coverts sandy buff; irides light brown; bill and feet black. The female is similar in colour, but is destitute of the black on the lores and the red on the throat.

Total length, $6\frac{3}{4}$ inches; bill, $\frac{11}{16}$; wing, $3\frac{7}{8}$; tail, $3\frac{3}{8}$; tarsi, 1.

Hab. Western Australia.

Digitized by Google

Digitized by Google

July 9th, 1844.

William Horton Lloyd, Esq., in the Chair.

Mr. Yarrell laid upon the table three specimens of the *Rana esculenta*, of different stages of growth, from Foulmire, Cambridgeshire, presented to the Society by F. Bond, Esq.

"Descriptions of a number of new species of Shells belonging to the genus *Cytherea*," by Sylvanus Hanley, Esq.

CYTHEREA VARIANS. *C. testâ ovato-cordatâ, inæquilaterali, subventricosâ, tenuiusculâ, albâ, maculis et lineis angulatim flexuosis castaneis variegatâ, concentricè (et anticè præsertim) sulcato-striatâ; lunulâ magnâ, cordatâ, lineâ impressâ circumscriptâ, albâ, maculâ castaneâ aut livido-purpurascente basi ornatâ; pube castaneo venulatâ; superficie internâ omninò albidâ; margine integro; cardine ut in* C. læta. Long. 1; lat. 1·45 poll.

Index Test. Sup. t. 15. f. 33.

Hab. Brazil.

Easily distinguished from *læta* and *obliquata* by its lunule, and from *pellucida* (to which in colouring and general contour it approximates) by its close and irregular groove-like striæ.

CYTHEREA OBLIQUATA. *C. testâ ovato-cordatâ (interdum oblongo-cordatâ), tumidâ aut ventricosâ, solidiusculâ, sublævigatâ, albidâ, lineis angularibus minutissimis brunneis aspersâ; margine ligamentali convexiusculo, subdeclivi; ventrali subarcuato; lunulâ magnâ, indistinctâ, colorum experte; natibus valdè obliquis, candidis; ligamento angusto; extremitate posticâ obtusâ; superficie internâ albâ aut albido-roseâ; margine integro.* Long. 1·75; lat. 2·50 poll.

Index Test. Sup. t. 15. f. 24.

Hab. ——? Mus. Cuming, Hanley, &c.

A species which for a long time has been confounded with *læta*, whose dentition, lunule and general shape it possesses. It is however a broader shell, with the beaks still more oblique, and its surface invariably speckled with minute scattered linear zigzags, which are more closely congregated near the swollen umbones.

CYTHEREA PLEBEIA. *C. testâ suborbiculari, subquadratâ, valdè inæquilaterali, solidâ, compressiusculâ, squalidè albidâ, fulvo variegatâ (intus lividâ), concentricè et confertissimè sulcatâ; margine ligamentali convexo et subdeclivi; postico dorsali paululùm subretuso et valdè declivi; ventrali arcuato; umbonibus haud complanatis et minimè striis divaricatis instructis; lunulâ lanceolatâ, albâ; margine interno subcrenulato.* Long. 1; lat. 1·20 poll.

Index Test. Sup. t. 15. f. 37.

Hab. Catbalonga, Philippines. Mus. Cuming, Hanley.

This species is allied to the type of its subgenus, the *Circe scripta*, but the compressed umbones of that shell at once distinguish it.

Digitized by Google

Minute tawny zigzags adorn the whitish ground of the anterior surface, whilst the fulvous hue predominates posteriorly.

Cytherea Philippinarum. *C. testâ cordatâ, inæquilaterali, ventricosâ, crassiusculâ, pallidè lividâ, radiis et lineis angulatim flexuosis saturatioribus variegatâ, concentricè costellatâ; costellis convexis, confertis; interstitiis lævigatis; lunulâ brevi, cordiformi, albâ; rimâ livido purpurascente; margine ventrali integro, arcuato; superficie internâ albidâ, maculâ lividâ sub umbonibus notatâ.* Long. 0·80; lat. 1 poll.

Index Test. Sup. t. 15. f. 36.

Hab. Philippines. Mus. Cuming, Hanley.

Very distinctly characterized by its crowded narrow ribs. The dentition is that of its subgenus *Chione*, and the short white lunule, equally with the narrow ligament, is bordered with livid purple.

Cytherea Diemenensis. *C. testâ oblongo-cordatâ, convexâ, nitidiusculâ, concentricè et obsoletè sulcatâ, carneo-fulvâ; radiis angustis lunulâque lanceolatâ, colore tinctis saturatiore; pube albâ, strigis flexuosis litteratâ; superficie internâ albidâ, radio fusco-purpureo obliquo, sub umbonibus ornatâ; margine integro.* Long. 0·80; lat. 1·20 poll.

Hab. Van Diemen's Land. Mus. Metcalfe.

Easily to be distinguished from those allied to it in form by its internal ray. The hinge is that of the section *Chione*.

Cytherea cor. *C. testâ cordato-trigonâ, intus extusque albâ, convexiusculâ, undique concentricè striatâ; striis exilibus, regularibus, confertissimis; latere postico majore, subcuneiformi; margine ligamentali valdè declivi, convexiusculo; ventrali subarcuato; natibus acutis; lunulâ oblongâ, impressâ; margine interno integro.* Long. 0·80; lat. 1 poll.

Index Test. Sup. t. 15. f. 7.

Hab. Africa. Mus. Metcalfe.

Not unlike the *Venus variabilis* of Sowerby in shape and general appearance. The epidermis is of that white velvety texture which we meet with in *argentea*.

Cytherea Hindsii. *C. testâ trigonâ, ventricosâ, solidiusculâ, lævigatâ, nitidâ, subæquilaterali, albidâ, brunneo nebulosâ, utrinque obtusâ; latere antico paululùm majore; natibus incurvatis, pallidis; lunulâ magnâ, subinconspicuâ, omninò pallidâ; pube fusco strigatâ; superficie internâ albidâ; margine integro.* Long. 1; lat. 1 poll.

Index Test. Sup. t. 15. f. 35.

Hab. Guayaquil. Mus. Cuming, Hanley.

This and the succeeding species belong to the subgenus *Trigona*, and are easily distinguished from the *Mactroides* of Born and Chemnitz by the absence of a purple stain upon the umbones.

"Descriptions of new species of Tritons, collected chiefly by H. Cuming, Esq. in the Philippine Islands," by Lovell Reeve, Esq.

Triton gallinago. *Trit. testâ abbreviato-clavæformi, varicibus*

Digitized by Google

duobus, rotundis, solidis; spirâ breviusculâ, acuminatâ; anfractibus supernè angulatis, tuberculorum serie unicâ ad angulum armatis, tuberculis peculiariter plano-vellicatis, acutis, anfractûs ultimi valdè irregularibus; anfractibus infra costatis, costis crenulatis, sub tuberculis flexuosè nodulosis, costarum interstitiis elevato-striatis; albâ, varicibus aurantio-fusco vividè tinctis; columellâ rugoso-plicatâ, aperturæ fauce albâ, labro intus fortiter denticulato; canali subelongato, ascendente.

Conch. Icon., *Triton*, pl. 2. f. 5.

Hab. Cagayan, province of Misamis, island of Mindanao, Philippines (found in sandy mud at the depth of twenty fathoms); Cuming.

The ribs of this delicate species are noduled, and more strongly developed on the varices than on the body of the shell; and the central dorsal tubercle of the last whorl is unusually prominent, with all the appearance of a double tubercle. The canal is much shorter than that of most of the club-shaped Tritons, and is particularly curved or bent upwards.

Triton Ranelloides. *Trit. testâ Ranellæformi, varicibus decem nodiferis; spirâ elevatâ; anfractibus, superficie totâ subtilissimè reticulatâ, supernè depressis, infra nodis grandibus biseriatim, anfractu ultimo triseriatim, cinctis, nodis inferioribus minoribus; luteo-albidâ, fuscescente variâ, tæniis subtilissimis fuscescente alboque articulatis, lineis fuscis fortioribus inter nodos, cinctâ; columellâ maculâ purpureâ albirugosâ supernè tinctâ; aperturæ fauce albâ, labro intus leviter denticulato; canali brevissimo.*

Conch. Icon., *Triton*, pl. 3. f. 10.

Hab. Matnog, province of Albay, island of Luzon, Philippines (found on the reefs); Cuming.

Partaking as this shell does in almost equal proportion of the characters of both *Triton* and *Ranella*, it has been a matter of some difficulty to decide to which of the two genera it might with the greater propriety be referred.

Triton exilis. *Trit. testâ clavæformi, varice unico parvo; spirâ breviusculâ; anfractibus supernè angulatis, infernè coarctatis, transversim subirregulariter costatis, costis liris parvis longitudinalibus decussatis, tuberculatis, tuberculis grandibus, prominentibus, subcompressis; albâ, aurantio-fusco sparsim tinctâ; columellâ plicatâ, plicis superioribus valdè majoribus, aperturæ fauce albâ, labro intus rugoso-denticulato; canali longissimo, supernè peculiariter contorto.*

Conch. Icon., *Triton*, pl. 4. f. 11.

Hab. San Nicolas, island of Zebu, Philippines (found in sandy mud at the depth of ten fathoms); Cuming.

This highly interesting species has been erroneously published by Mr. Sowerby in his 'Genera of Shells,' and by myself in my 'Conchologia Systematica,' vol. ii. plate 243. fig. 3, for the *Triton clavator*, and demonstrates how necessary is the examination of an entire genus by comparison for the proper discrimination of the species. No question as to the specific difference of these two shells could

Digitized by Google

however be urged, for they vary materially both in form and detail of sculpture. The *Triton clavator* is comparatively full and ventricose, with the upper ribs only moderately tubercled; the *Triton exilis* is small, peculiarly contracted round the lower part, with the tubercles very prominently developed entirely across the whorls: in the former species there is a varix on the penultimate whorl as well as upon the last whorl; in the latter species, as in the *Triton canaliferus*, there is no varix upon the penultimate whorl; lastly, the mouth of the former species is either yellowish or yellowish scarlet, whilst that of the latter exhibits not the slightest indication of colour, and the stains of orange-brown with which it is marked externally are of a character not to be misunderstood.

Triton Pfeifferianus. *Trit. testâ fusiformi, varicibus septem prominentibus, acutangularibus; spirâ elatâ; anfractibus subirregulariter convolutis, convexis, supernè plano-depressis, leviter canaliculatis, transversim costulatis, costulis irregularibus, nunc angustis, nunc latioribus, striis elevatis longitudinalibus nodulosodecussatis, anfractuum parte mediand nodosâ, nodis distantibus, longitudinaliter subplicatis; fuscescente, fusco pallidè variâ; columellâ rugulosâ, labro intus rugoso-denticulato; canali subelongato.*

Conch. Icon., *Triton*, pl. 4. f. 14.

Reeve, Pro. Zool. Soc., 1844.

Hab. —— ?

This species may probably be recognised as one of not uncommon occurrence, though not hitherto described; its leading features are the rude manner in which one whorl is deposited on the other, the prominent sharp-angled structure of the varices, and the delicate granulated sculpture of the ribs where they are crossed by the raised striæ; and its general appearance is altogether peculiar.

I take the liberty of dedicating this characteristic species to Dr. Pfeiffer of Cassel, Germany, on account of the diligence that gentleman has exercised in arranging the synonyms of the genera *Triton* and *Ranella* in his "Memoir of the genus *Tritonium*," Revue Zoologique de la Société Cuviérienne.

Triton Sauliæ. *Trit. testâ elongato-conicâ, tubæformi, paululùm contortâ, basim versus subangulato-attenuatâ, varicibus novem decemve plano-depressis; spirâ acuminatâ; anfractibus subangulatis, nodorum prominentium seriebus duabus infra angulum armatis, subtilissimè liratis, liris apicem versus minutissimè crenulatis; albido aut lutescente, rubido-fusco variegatâ et maculatâ; epidermide tenui; columellâ lævi, obsoletè plicatâ, plicâ albâ unicâ supernè munitâ; labro intus denticulato; aperturâ angulato-ovatâ, fauce cærulescente-albâ.*

Conch. Icon., *Triton*, pl. 5. f. 17.

Hab. Matnog, island of Luzon, Philippines; Cuming.

I was about to figure a somewhat discoloured specimen of this shell, collected by Mr. Cuming at the above-mentioned locality, when a smaller but very richly painted example presented itself for comparison from the collection of Miss Saul. It is unquestionably di-

Digitized by Google

stinct from any of the trumpet-shaped species, though curiously intermediate between the *Triton variegatus* and *australis*. I now dedicate it with great pleasure to a much-esteemed collector, whose cabinet bears interesting testimony of her excellent discrimination of species.

TRITON SINENSIS. *Trit. testâ elongato-clavæformi, varicibus duobus rotundis; spirâ subelatâ; anfractibus costis duplicibus subdistantibus undique cinctis, striâ unicâ elevatâ interveniente, costis superis leviter nodosis, costis interstitiisque subtilissimè crenulatis; albidâ, lutescente tinctâ, varicibus inter costas lutescentibus; columellâ multirugosâ; labro denticulato; aperturæ fauce albâ; canali elongato, subcontorto.*

Conch. Icon., *Triton*, pl. 6. f. 18.

Hab. China.

This shell is not uncommon in collections, though it appears to have been singularly neglected by naturalists. It presents a most remarkable modification of the *Triton canaliferus*: the entire sculpture of the two species—such as, for example, the double rib, the intervening raised line, the two only varices, the profusely wrinkled columella, the long slightly twisted canal, &c.—is the same in both; but the canaliculated structure of the sutures, which forms so very important a specific character in the *Triton canaliferus*, is wanting. The *Triton Sinensis* might therefore be recognised as an example of the *Triton canaliferus* with the spire pushed out as it were; or one in which the whorls have not been subject to that peculiar depression which forms so deep and characteristic a channel round the suture.

TRITON GRANDIMACULATUS. *Trit. testâ ovato-turritâ, crassâ, infernè coarctatâ, varicibus tribus; spirâ subobtusâ; anfractibus supernè angulatis, transversim exiliter striatis et liratis, liris superis tuberculato-nodosis; fuscescente-fulvâ, varicibus et columellæ parte superiori maculis grandibus nigerrimo-fuscis ornatis; columellâ lævi vel obsoletè plicatâ; labro intus dentato, dentibus nigerrimo-fuscis; aperturæ fauce albâ; canali brevisculo, subascendente.*

Conch. Icon., *Triton*, pl. 6. f. 20.

Hab. Matnog, province of Albay, island of Luzon (found on the reefs); Cuming.

This shell appears at first sight to be nothing more than a casual variety of the *Triton lotorium*; it will be found, however, upon examination to differ materially. The large tuberculated humps of the *Triton lotorium* are here represented by regular series of small rounded knobs, which impart a kind of cancellated structure to the earlier whorls which is very characteristic; the lower part of the shell is not distorted, and the varices, especially at the back, are vividly painted with large distinct brown blotches.

TRITON SARCOSTOMA. *Trit. testâ subabbreviato-clavæformi, varicibus duobus, rotundis, solidiusculis; spirâ brevi, apice subdepresso; anfractibus supernè angulatis, transversim costatis, costis noduloso-*

Digitized by Google

crenatis, costarum interstitiis subtiliter crenato-liratis, costis superis tuberculatis, tuberculis grandibus, prominentibus, subcompressis; spadiceo-fuscescente, costis inter tubercula albimaculatis; columellâ supernè et infernè leviter corrugatâ, labro intus fortiter rugoso-denticulato; columellâ labroque carneo eximiè tinctis.

Conch. Icon., *Triton*, pl. 7. f. 21.

Hab. Island of Ticao, Philippines (found on the reefs); Cuming.

This shell has somewhat the aspect of the *Triton cynocephalus*; it differs in being much less ventricose, and in having very prominent tubercles round the upper part of the whorls. The mouth is stained with a pale flesh-tint without any indication of dark colour on the columella.

TRITON AQUATILIS. *Trit. testâ fusiformi-turritâ, varicibus septem octove rotundis, prominentibus; spirâ elatâ; anfractibus convexis, transversim costatis, costis duplicibus, subdistantibus, liris undatis tuberculiferis longitudinaliter decussatis; pallidè rufescente-fuscâ, fusco maculatâ et variegatâ; columellâ et aperturæ fauce carneo-tinctis, albirugosis, labro intus albidenticulato; canali brevi, ascendente.*

Conch. Icon., *Triton*, pl. 7. f. 24.

Hab. Island of Ticao, Philippines (found on the reefs at low water); Cuming.

The longitudinal waved ridges which adorn the surface of this interesting species have, in the fine specimen before me, a beautiful ripple-like appearance which is very characteristic. The columella and interior are covered with enamel of a bright uniform flesh-tint, and the varices are very round and prominent. I have seen several examples of this species in different stages of growth, all exhibiting the above peculiarities with remarkable specific distinctness.

TRITON TRILINEATUS. *Trit. testâ clavato-fusiformi, varicibus tribus; spirâ breviusculâ; anfractibus supernè angulatis, ad angulum compresso-tuberculatis, transversim plano-liratis, liris subtilissimè crenulatis, interstitiis lineis tribus elevatis sculptis; albidâ, fusco variegatâ, varicibus fusco-maculatis; columellâ lutescente-albâ, costatâ; canali subelongato, leviter ascendente; labro fortiter denticulato-costato; aperturæ fauce albâ.*

Conch. Icon., *Triton*, pl. 10. f. 31.

Hab. Philippine Islands; Cuming.

This is a strongly marked species, with the denticulated sculpture of the lip extending into the aperture after the manner of ribs; and the body of the shell is crossed by flattened ridges, between each of which are three very characteristic raised lines.

TRITON ÆGROTUS. *Trit. testâ subpyriformi, varicibus validis duobus; spirâ acutâ; anfractibus supernè angulatis, transversim costatis, liris minutis tribus vel quatuor inter costas decurrentibus, costis superis tuberculatis, tuberculis infernè evanidis; albidâ, fuscescente maculatâ; columellâ plicatâ; canali subelongato, subascendente; aperturæ fauce albâ; labro intus denticulato.*

Digitized by Google

Conch. Icon., *Triton*, pl. 12. f. 42.

Hab. China.

Care must be taken not to confound this shell with the *Triton trilineatus*, in which the dorsal tubercles are more strongly developed, and which has no varix on the back of the penultimate whorl.

TRITON ENCAUSTICUS. *Trit. testâ pyriformi, varice unico depressiusculo; spirâ rotundato-depressâ; anfractibus transversim costatis, tuberculorum seriebus plurimis longitudinalibus armatis, inferioribus minoribus; albidâ, fusco variè tinctâ; columellâ lævi, crassissimè encausticâ, aurantio-lutescente; canali elongato, ascendente; labro aurantio-lutescente, intus denticulato.*

Conch. Icon., *Triton*, pl. 12. f. 43.

Hab. Island of Ticao, Philippines (found on the reefs); Cuming.

The enamelled character of the mouth of this shell is somewhat like that of the *Triton tuberosus*; the form is that of the *Triton retusus*.

TRITON RIDENS. *Trit. testâ elongato-ovatâ, subfusiformi, solidiusculâ, distortâ, varicibus quinque sexve subindistinctis; spirâ acuminatâ; anfractibus liris angustis elevatis prominentibus distantibus eleganter clathratis, liris transversis duplicatis; cærulescente-albâ, epidermide sericâ indutâ; columellâ fortiter rugosâ, aurantio tinctâ; canali breviusculo, vix ascendente; aperturâ parvâ, coarctatâ; labro intus fortiter dentato, albo, aurantio marginato.*

Conch. Icon., *Triton*, pl. 12. f. 46.

Hab. Philippine Islands; Cuming.

Although this species exhibits little more than a modification of the characters of the *Triton cancellinus*, the difference is of good specific importance. The cancellated sculpture is wider and more prominent, whilst the ridges are more sharply noduled in crossing over each other. The wrinkles and denticulations which surround the aperture are much more strongly developed, and the orange-stained colouring of the enamelled disc is peculiarly characteristic.

TRITON THERSITES. *Trit. testâ subfusiformi, varicibus quatuor; spirâ exsertâ; anfractibus transversim granoso-liratis, angulatis, ad angulum tuberculatis, tuberculis validis, valdè prominentibus, anfractuum totâ superficie subtilissimè granulosâ; columellâ albâ, subexcavatâ, leviter rugosâ, callositate supernè armatâ; canali longiusculo, subascendente; labro intus leviter denticulato.*

Conch. Icon., *Triton*, pl. 13. f. 48.

Hab. —— ?

Several shells have been named after the rude enemy of Achilles as significant of their deformity. The *Triton* under consideration, though it has quite a hump-backed appearance from the prominence of the dorsal tubercles, is however beautifully granulated, the granulated ridges being especially neatly sculptured in passing over the tubercles and varices.

TRITON MORITINCTUS. *Trit. testâ ovato-oblongâ, ventricosâ, varice unico elevato; spirâ depressâ; anfractibus supernè plano-angulatis,*

Digitized by Google

transversim crenulato-costatis, ad angulum fortiter tuberculatis, tuberculis acutis, infernè evanidis, transversim subtiliter sulcatis; rubidâ, varicibus albimaculatis; epidermide subsetosâ; columellâ rufo-aurantiâ, maculâ grandi, nigricante-purpureâ, albirugosâ, tinctâ; canali subelongato, subcontorto; aperturæ fauce rufo-aurantiâ; labro intus fortiter dentato.

Conch. Icon., *Triton*, pl. 13. f. 49.

Hab. Philippine Islands; Cuming.

This shell, which is not uncommon in collections, approximates very closely to the *Triton cynocephalus*; it is however specifically distinct. The whorls of the *Triton moritinctus* are very strongly tubercled, the tubercles being disposed in waved longitudinal rows, whilst in the *Triton cynocephalus* the tubercles have more the appearance of regular nodules.

TRITON EXARATUS. *Trit. testâ subtrigono-fusiformi, varicibus duobus; spirâ elevato-turritâ; anfractibus supernè planissimo-angulatis, ad angulum subnodosis, transversim liratis, liris compressis, duplicatis, crenulatis, interstitiis excavato-sulcatis; albidâ, fuscescente cæruleoque variè tinctâ; columellâ albâ, subrugosâ; canali longiusculo; aperturâ rotundâ; labro intus dentato.*

Conch. Icon., *Triton*, pl. 13. f. 50. *a* and *b*.

Var. *β*. *Testâ nigricante-fuscâ, albibalteatâ.*

Hab. North coast of New Holland.

This is a very characteristic species, with the transverse ridges standing out in bold relief, and the upper part of the whorls peculiarly flat and indented at the sutures.

TRITON FICOIDES. *Trit. testâ trigono-ficiformi, varicibus quinque; spirâ brevi, obtusâ; anfractibus dorsim tumidiusculis, transversim liratis, liris nodosis, super varices duplicatis; columellâ nodosâ et rugosâ, infernè luteo-sanguineo tinctâ; canali brevi; labro intus fortiter dentato.*

Conch. Icon., *Triton*, pl. 13. f. 51.

Hab. Africa.

M. Kiener should have been sure of this shell being the *Ranella caudata* of Say, before he ventured to question the generic appropriation of that species. It is quite another thing, and I much doubt if a shell of such bright and vivid colour were ever found within the latitude of New York. The *Ranella caudata* belongs to a small group of *Ranellæ*, of which the *R. Muriciformis* is the type.

TRITON ACUMINATUS. *Trit. testâ subfusiformi, varice nullo; spirâ acutissimè acuminatâ; anfractibus numerosis, transversim elevato-striatis, longitudinaliter costatis, costis subobliquis, crebriusculis; columellâ subtilissimè rugosâ; canali breviusculo, ascendente; aperturâ parvâ, rotundâ; labro intus denticulato.*

Conch. Icon., *Triton*, pl. 14. f. 54.

Hab. China.

The *Triton acuminatus* is another very aberrant form, though belonging to that interesting section of the genus of which the *Triton niveus* is the type.

Digitized by Google

TRITON GRACILIS. *Trit. testâ gracili-fusiformi, varicibus tribus; spirâ subelatâ; anfractibus tuberculato-nodosis, liris parvis subtiliter decussatis; lutescente-albâ, vel fuscâ, albibalteatâ, epidermide tenui subsetosâ indutâ; columellâ fortiter rugosâ, albâ; canali subelongato, ascendente; aperturæ fauce albâ; labro intus peculiariter rugoso-denticulato.*

Conch. Icon., *Triton*, pl. 15. f. 58.

Hab. Philippine Islands; Cuming.

A delicate little species, in which the outer lip is peculiarly fully wrinkled within.

TRITON ELONGATUS. *Trit. testâ elongato-fusiformi, varice unico subindistincto; spirâ acuminatâ; anfractibus supernè leviter angulatis, transversim liratis et striatis, liris striisque granuloso-crenatis, æquidistanter nodulosis; cinereâ, liris livido-purpureis; columellâ excavatâ, rugosâ, callositate supernè armatâ; canali elongato, subcontorto; labro intus dentato, dentibus binis.*

Conch. Icon., *Triton*, pl. 15. f. 59.

Hab. Philippine Islands; Cuming.

This shell approximates very closely to the *Triton vespaceus*; so closely indeed, that I may be thought rather venturous to describe it as a new species. The differences however are as follows: the canal is much more elongated, the whorls are not tubercled, and the beaded ridges are of a peculiar livid-purple colour.

TRITON GEMMATUS. *Trit. testâ elongato-oblongâ, varicibus quatuor-vel quinque; spirâ subobtusâ; anfractibus liris, pulcherrimè gemmatis, cingulatis, interstitiis striis elevatis longitudinalibus et transversis eximiè clathratis; aurantio-lutescente; columellâ rugosâ, callositate supernè armatâ; canali breviusculo; labro intus dentato, dentibus binis.*

Conch. Icon., *Triton*, pl. 15. f. 60.

Hab. Island of Ticao, Philippines (found under stones at low water); Cuming.

Var. β. *Testâ albâ, varicibus duobus ad sex; liris subnodosis.*

Hab. Island of Annaa (Chain island), South Pacific Ocean, and island of Burias, Philippines (found under stones in both localities at low water); Cuming.

The sculpture of this shell is very similar to that of the *Triton rubecula*; the beaded ridges are however wider apart, and on the varices have three smaller ridges between them.

TRITON OBSCURUS. *Trit. testâ elongato-turritâ, varicibus undecim; spirâ acuminatâ; anfractibus transversim granulosis, longitudinaliter subobsoletè sulcatis, sulcis creberrimis; fuscescente, fusco pallidè balteatâ, maculis fuscis quadratis perpaucis seriatim pictâ, varicibus fusco maculatis; columellâ lævi, crassissimè encausticâ; canali brevissimo, labro intus denticulato.*

Conch. Icon., *Triton*, pl. 16. f. 63.

Hab. East. Indies; Lieut. Babb.

This shell may have been probably confounded with the *Triton*

Digitized by Google

maculosus; it differs however in not being transversely grooved, in having a different arrangement of the varices, and in other minor particulars.

TRITON CRISPUS. *Trit. testâ ovatâ, subfusiformi, varicibus duobus vel tribus; spirâ breviusculâ; anfractibus liris crispis prominentibus, subdistantibus, decussatis, liris ad decussationem nodulosis, interstitiis striis crispis elevatis subtilissimè cancellatis; cinereo-cærulescente, varicibus lirisque albidis; columellâ excavatâ, rugosâ, callositate supernè armatâ; canali breviusculo; labro intus fortiter denticulato.*

Conch. Icon., *Triton*, pl. 17. f. 68.

Hab. —— ?

Quite distinct from any hitherto described species.

TRITON EBURNEUS. *Trit. testâ ovato-oblongâ, varicibus tribus vel quatuor remotiusculis; spirâ brevi; anfractibus liris parvis obtusis creberrimè decussatis; intus extusque albâ; columellâ excavatâ, infernè subrugosâ; canali brevissimo; labro intus denticulato.*

Conch. Icon., *Triton*, pl. 17. f. 69.

Hab. Island of Ticao, Philippines (found under stones at low water); Cuming.

This shell has somewhat the form of the *Triton Quoyi*, an interesting little New Holland species, which M. Kiener thought to be the recent analogue of Lamarck's fossil *Triton viperinum*.

TRITON VERRUCOSUS. *Trit. testâ subpyramidali-oblongâ, varicibus quatuor vel quinque; spirâ mediocri; anfractibus supernè impressis, transversim striatis et liratis, liris longitudinalibus prominentioribus decussatis, ad decussationem nodosis; aurantio-fuscescente, anfractuum parte inferiori fusco inter nodos articulatâ; columellâ excavatâ, vix rugosâ; canali brevissimo.*

Conch. Icon., *Triton*, pl. 17. f. 71.

Hab. —— ?

Care must be taken not to confound this shell with the lesser New Holland species, *Triton Quoyi*.

TRITON TORTUOSUS. *Trit. testâ oblongo-turritâ, subangustâ, varicibus octo obliquè invicem subsequentibus; spirâ tortuosâ; anfractibus granulis parvis subtiliter reticulatis; lutescente, maculis fuscis grandibus, longitudinaliter undatis, eleganter pictâ; columellâ excavatâ, subgranulosâ; canali brevissimo, recurvo.*

Conch. Icon., *Triton*, pl. 17. f. 74.

Hab. Island of Burias, Philippines (found under stones at low water); Cuming.

This interesting species approximates very closely to the *Triton distortus*; it differs in being of a more delicate and slender form, in the granules being less prominent, and in the peculiar waved style of the painting.

TRITON SCULPTILIS. *Trit. testâ oblongo-turritâ, varice nullo; spirâ exsertâ; anfractibus longitudinaliter costellatis, costellis angustis,*

Digitized by Google

interstitiis striis elevatis cancellatis, anfractûs ultimi parte inferiori conopeo carinæformi prominente peculiariter ornatâ; albidâ, suturis fuscis; columellâ lævi; canali brevissimo.

Conch. Icon., *Triton*, pl. 18. f. 76.

Hab. Island of Capul, Philippines (found under stones at low water); Cuming.

In addition to the above account of this beautiful species, it may be noticed that the transverse striæ are brown upon the ribs and white in the interstices; the sutures are brown in consequence of the whorls being encircled with a brown line just at the point where one whorl lodges in its spiral growth upon the other, over the basal canopy, as if to mark out the exact plan of convolution.

TRITON EXIMIUS. *Trit. testâ oblongo-turritâ, varice nullo; spirâ acuminatâ; anfractibus costellis minutis eximiè cancellatis, longitudinalibus majoribus, valdè remotioribus; albâ, fuscescente obscurè fasciatâ; canali brevissimo.*

Conch. Icon., *Triton*, pl. 18. f. 77.

Hab. Lord Hood's Island, Pacific Ocean (on the reefs), and island of Capul, Philippines (under stones at low water); Cuming.

A neatly cancellated, almost colourless, shell.

TRITON EGREGIUS. *Trit. testâ elongato-ovatâ, varice nullo; spirâ acutâ; anfractibus longitudinaliter costatis, striis elevatis transversis cancellatis; albâ, costis medio albis, supra et infra fuscis; canali brevi, recurvo.*

Conch. Icon., *Triton*, pl. 18. f. 78.

Hab. Island of Masbate, Philippines (found under stones at low water); Cuming.

The style or arrangement of the sculpture not much unlike the preceding species; the shell is however larger, more globose, and has a very pretty appearance, arising from the dark brown upper and lower portions of the ribs being crossed by white striæ.

TRITON SIPHONATUS. *Trit. testâ fusiformi-turritâ, varicibus novem, subindistinctis; spirâ acuminatâ; anfractibus creberrimè reticulatis, ultimo anticè quasi siphonato; roseo- aut cæruleo-albidâ, aurantio-fusco sparsim maculatâ; laminâ columellari tenui, lævi; aperturâ elongato-ovatâ; labro subtilissimè denticulato.*

Conch. Icon., *Triton*, pl. 18. f. 81.

Hab. ——?

Chiefly distinguished by its anterior extension.

TRITON DECAPITATUS. *Trit. testâ elongato-turritâ, varice nullo; spirâ decollatâ; anfractibus longitudinaliter concentricè costellatis, costellis angustis, numerosis, confertis, transversim striatis; lutescente, fusco subindistinctè maculatâ; costellis aurantio-fuscis, lineâ lutescente anticè interruptis, anfractu ultimo lineis lutescentibus duabus; canali brevissimo.*

Conch. Icon., *Triton*, pl. 18. f. 85.

Hab. Island of Burias, Philippines (found under stones at low water); Cuming.

Digitized by Google

Care must be taken not to confound this species with the *Triton truncatus*, in which the ribs are larger and wider apart, and the colour not interrupted.

TRITON DIGITALE. *Trit. testâ oblongâ, varice nullo; spirâ acuminatâ; anfractibus seriatim granulosis, granulis numerosis, confertis, obtusis; albidâ, fuscescente sparsim punctatâ; canali brevissimo.*

Conch. Icon., *Triton*, pl. 19. f. 86.

Hab. Island of Capul, Philippines (found under stones at low water); Cuming,

The sculpture of the shell is much like the granular surface of a thimble.

TRITON CONCINNUS. *Trit. testâ oblongâ, tenuiculâ, varice nullo; spirâ subacuminatâ; anfractibus longitudinaliter concentricè costellatis, transversim creberrimè striatis; lutescente, aurantio-fuscescente peculiariter pictâ, apice roseo-purpureo; canali brevissimo.*

Conch. Icon., *Triton*, pl. 19. f. 87.

Hab. Philippine Islands; Cuming.

The bright orange-brown painting is peculiarly festooned, as it were, round the upper part of the whorl next the suture.

TRITON ANGULATUS. *Trit. testâ oblongâ, turritâ, varice nullo; spirâ acuminatâ; anfractibus supernè angulatis, longitudinaliter costellatis, transversim striatis, striis prominentibus, confertis; luteâ, aut lutescente-albâ, rubido-fusco alboque sparsim punctatâ; canali brevissimo.*

Conch. Icon., *Triton*, pl. 19. f. 88.

Hab. Island of Ticao, Philippines (found under stones at low water); Cuming.

Chiefly distinguished by the angular structure of the whorls next the suture.

TRITON LATIVARICOSUS. *Trit. testâ oblongâ, solidâ, subcompressâ, varicibus tribus vel quatuor latis; spirâ subobtusâ; anfractibus longitudinaliter concentricè costellatis, costellis solidis, subdistantibus, transversim creberrimè striatis; canali brevissimo.*

Conch. Icon., *Triton*, pl. 19. f. 90.

The varices of this shell are unusually broad, and the ribs are wider apart on the back of the whorls than on the side.

TRITON TESSELLATUS. *Trit. testâ elongatâ, varice nullo; spirâ acuminatâ, acutâ; anfractibus striis longitudinalibus et transversis subtilissimè reticulatis; albidâ, maculis grandibus rubido-fuscis subirregulariter tessellatâ; canali brevi, subrecurvo.*

Conch. Icon., *Triton*, pl. 19. f. 91.

Hab. Island of Burias, Philippines (found under stones at low water); Cuming.

This shell may be easily recognised by its rude tessellated spots.

TRITON BACILLUM. *Trit. testâ elongato-clavæformi, solidâ, varici-*

Digitized by Google

bus duobus; spirâ elongatâ, subretusâ; anfractibus obtuso-granulosis; cærulescente-albâ; canali brevissimo, recurvo; aperturâ breviusculâ.

Conch. Icon., *Triton*, pl. 19. f. 94.

Hab. —— ?

This is the only species of *Triton* I have noticed with a single varix on each side.

TRITON CARDUUS. *Trit. testâ globosâ, ventricosâ, varice nullo; spirâ brevi, acutissimâ; anfractibus longitudinaliter costatis, transversim striatis, striis valdè elevatis, costas super submuricato-nodosis; albidâ, fuscescente variâ; columellâ excavatâ; canali brevi.*

Conch. Icon., *Triton*, pl. 19. f. 95.

Hab. —— ?

A rather thin shell, of very sharply cancellated sculpture.

TRITON PAGODUS. *Trit. testâ pyramidali-ovatâ; spirâ acuminato-turritâ, varice nullo; anfractibus subventricosis, supernè angulatis, transversim creberrimè elevato-lineatis, longitudinaliter costatis, costis compressiusculis, subdistantibus; albidâ, rubido-castaneo multifasciatâ; canali brevi, valdè recurvo; aperturâ rotundâ; labro intus elevato-striato.*

Conch. Icon., *Triton*, pl. 20. f. 97.

Hab. Bay of Montija, West Columbia; Cuming.

This species partakes more of the character of *Nassa* than the preceding; it might be referred indeed to that genus with almost as much propriety as to *Triton*.

TRITON PICTUS. *Trit. testâ oblongo-ovatâ; spirâ subacuminatâ, varice nullo; longitudinaliter creberrimè costatâ, transversim elevato-striatâ; rubido-fusco alboque tessellatâ; canali brevi; aperturâ parvâ, fauce albâ.*

Conch. Icon., *Triton*, pl. 20. f. 97.

Hab. Gallapagos Islands (found under stones at low water); Cuming.

An interesting species tessellated with white and very rich dark brown, in which the latter colour greatly preponderates.

TRITON DECIPIENS. *Trit. testâ elongato-ovatâ, subfusiformi, distortâ, varicibus quinque sexve indistinctis; anfractibus liris angustis elevatis clathratis; albido-lutescente, epidermide sericâ indutâ; columellâ profundè excavatâ, rugosâ, subobsoletè umbilicatâ, callositatibus plurimis supernè armatâ, rufo-aurantiâ; labro plano-concavo, rufo-aurantio radiato, intus fortiter rugoso-dentato.*

Conch. Icon., *Triton*, pl. 20. f. 102.

Hab. Island of Mindanao, Philippines; Cuming.

I have long hesitated to consider this shell any other than a variety of the *Triton cancellinus*: the differences, though slight, seem however to remain constant. It is uniformly of smaller size, the transverse ridges are not duplicate, and the colour and wrinkled denticu-

Digitized by Google

lations of the columella and outer lip are of a peculiar and distinct character.

A fine specimen of the Wiry-haired Wolf or Deer-hound was exhibited to the Meeting by George Dodd, Esq., M.P.

July 28, 1844.

No business was transacted.

Digitized by Google

August 13, 1844.

Professor Owen, V.P., in the Chair.

The following notes from Sir Robert Heron, on the Jerboas in his collection, were read:—

"June 14th, 1844.—The Jerboas were received into this menagerie in June 1843. They are in a box full of cotton: the box is in a room five and a half feet by four and a half, floored with wood, and warmed by a flue which has always been heated at night; the room opens into a pen secured with wire, nine and a half feet by eight and a half. They have been offered many kinds of food, but eat only wheat and lettuce; they have never been seen to drink, but from the water diminishing and their parting with a considerable quantity of urine, we have no doubt of the fact. On the 14th of May last they produced two young ones; on the 12th inst. these young ones are still blind and unable to walk, also nearly naked, but they are grown and appear to be healthy: it is intended to make a pit in their abode about two feet square, filled with earth, where they may burrow.

"June 29.—It was not till their fifth week that the young Jerboas appeared to have the use either of their eyes or limbs; they had still little fur, but were a good deal grown. Now, being forty-six days old, they are about three-quarters grown, are well-clothed and active; they have been seen to eat corn, and are apparently quite established. A second box has been put into their chamber, and last night all four had removed into it. They have never been seen to drink, but it is thought they do so, as the water is sometimes diminished.

"July 20.—The young Jerboas are now exactly like the old ones."

The following extract was read from a communication from the Right Honourable the President of the Society:—

"I have eight young Oroonoko goslings; they are well-grown birds and nearly resemble the adults. I have also eight *Tetrao Umbellus* and two young *Tetrao Cupido*, and every prospect of hatching the Stanley Cranes. The young Eland Antelope and the young Common Zebra are going on charmingly; both the mothers have again taken the male, and my young *Antilope scripta*, not yet twelve months herself, has done the same."

"Descriptions of new species of *Arca*, chiefly collected by H. Cuming, Esq. in the Philippine Islands," by Lovell Reeve, Esq.

ARCA OBTUSA. *Arca testâ oblongâ, Modiolæformi, lateribus obtuso-rotundatis, margine ventrali bysso paululùm hiante; albâ, epidermide nigricante subsquamosâ partim indutâ; radiatim striatâ, striis*

Digitized by Google

élevatis; umbonibus depressiusculis, approximatis; ligamenti areâ parvâ, angustâ, profundè declivi.

Conch. Icon. *Arca*, pl. 12. f. 77.

Hab. Coast of Japan (found under stones); Dr. Siebald.

Very like a *Modiola* in shape, but not the recent analogue of the fossil *A. Modiolæformis* of Deshayes.

ARCA CUNEALIS. *Arca testâ elongato-oblongâ, lateribus supernè angulatis, antico brevi, rotundato, postico elongato, angulato, carinâ ab umbone ad marginem decurrente, margine ventrali bysso hiante; pallidè fuscâ, epidermide molli lamellatâ indutâ; radiatim striatâ, striis elevatis, fortiter granulosis, aream posticâ subindistinctè nigricostatâ; umbonibus subapproximatis, ligamenti aream latiusculâ, concavâ, sulcis ligamentariis anticis posticisque, subdistantibus.*

Conch. Icon. *Arca*, pl. 13. f. 87.

Hab. Zanzibar (found under stones at low water); Thorn.

The sculpture of this species corresponds precisely to that of the *Arca mutabilis*; the form of the shell is more depressly elongated, the anterior side is shorter, and there are ligamentary grooves on the posterior part of the cardinal area as well as on the anterior.

ARCA TENELLA. *Arca testâ subcylindraceo-oblongâ, Modiolæformi, tenui, subpellucidâ, lateribus obtuso-rotundatis, margine ventrali vix hiante; pallidè fuscescente, epidermide molli leviter indutâ; radiatim subtilissimè striatâ, striis granulosis; umbonibus obtusis, anticè incurvis; ligamenti areâ anticè latiusculâ, posticè lanceolato-acuminatâ.*

Conch. Icon. *Arca*, pl. 14. f. 91.

Hab. Island of Burias, Philippines (found under stones at low water); Cuming.

A delicate light brown shell, beautifully striated, with a soft scattered epidermis.

ARCA SETIGERA. *Arca testâ subquadrato-oblongâ, lateribus rotundatis, postico latiore, margine ventrali bysso vix hiante; rubido-fuscâ, epidermide fuscâ setigerâ indutâ; radiatim subtilissimè striatâ, striis elevatis, granulosis; umbonibus subapproximatis, anticè adjectis; ligamenti areâ angustâ, declivi.*

Conch. Icon. *Arca*, pl. 14. f. 94.

Hab. Zanzibar (found under stones at low water); Thorn.

This species approaches very closely to *Arca lacerata*; it appears, however, to be of an uniform smaller size, the posterior side is less expanded, and the bristles are set in single rows.

ARCA VIRESCENS. *Arca testâ elongatâ, lateribus rotundatis, postico leviter angulato, antico subattenuato; viridescente, epidermide tenui, ad aream posticam setosâ, indutâ; striis elevatis radiatâ; ligamenti areâ angustissimâ, umbonibus approximatis.*

Conch. Icon. *Arca*, pl. 15. f. 97.

Hab. Catbalonga, island of Samar, Philippines (found under stones at low water); Cuming.

Digitized by Google

A delicate greenish species, in which the epidermis lies on the posterior area in rows of fine bristles.

ARCA FASCIATA. *Arca testâ oblongâ, tenui, compressâ, lateribus rotundatis, supernè attenuatis; albidâ, fasciis cinereo-purpurascentibus indistinctis concentricè tinctâ; epidermide tenui, posticè setosâ, indutâ; radiatim striatâ, striis elevatis, irregularibus, striis transversis subtilissimis fimbriato-decussatis; ligamenti aream angustâ, profundè declivi; intus purpurascente.*

Conch. Icon. *Arca*, pl. 15. f. 99.

Hab. —— ?

This is a remarkably flattened shell, banded and stained with reddish and ashy purple both inside and outside.

ARCA LIMA. *Arca testâ elongato-ovatâ, lateribus supernè angulatis, antico infra rotundato, postico angulato-rotundato, subextenso; fuscescente, fusco tinctâ, posticè fusco maculatâ, epidermide tenui subtilissimè setosâ indutâ, radiatim liratâ, liris angustis, numerosis, confertis, granosis, perpaucis medianis duplicatis; lateraliter costatâ, costis rudibus, subdistantibus, crenato-nodosis; ligamenti aream angustâ.*

Conch. Icon. *Arca*, pl. 15. f. 101.

Hab. Islands of Burias and Corregidor, Philippines (found under stones at low water); Cuming.

The sculpture of this shell is very similar to that of the *Arca bullata*; it is, however, of much finer character, although the shell is more elongated and altogether larger.

ARCA OCELLATA. *Arca testâ elongato-quadratâ, lateribus supernè angulatis, latere antico brevissimo, infra rotundato, postico elongato, infra acuminato, margine ventrali bysso latissimè hiante; albidâ, epidermide tenui, subsetosâ, indutâ; radiatim striatâ, striis subtilissimè crenulatis; umbonibus remotis; ligamenti aream latissimâ, rhombo ligamentario peculiariter ocellato.*

Conch. Icon. *Arca*, pl. 15. f. 102.

Hab. Singapore (found in sandy mud at the depth of seven fathoms); Cuming.

This interesting little species exhibits a character which is quite peculiar to the species. The dark ligamentary space between the umbones is marked with a pair of oblique white oval spots, one on each valve.

ARCA DONACIFORMIS. *Arca testâ sub-Donaciformi, medio leviter coarctatâ, latere antico brevissimo, truncato, postico elongato, subacuminato; albidâ, epidermide vix nullâ, striis transversis et longitudinalibus elevatis fimbriato-decussatâ; ligamenti aream anticè latiusculâ, posticè acuminatâ; ligamento brevi, ad posticam areæ partem solum adjuncto.*

Conch. Icon. *Arca*, pl. 16. f. 104.

Hab. Mozambique Channel (found imbedded in madrepore); Hankey.

The ligament and ligamentary area of this species present exactly

Digitized by Google

the same peculiar structure as those of the *Arca pusilla* (*Byssoarca pusilla*, Sowerby, Proc. Zool. Soc. 1833); the shell is, however, altogether larger, more acuminated posteriorly, and the sculpture is of a smaller pattern.

ARCA TENEBRICA. *Arca testâ oblongo-ovatâ, lateribus angulato-rotundatis; fuscâ, epidermide tenui indutâ; radiatim striatâ, striis elevatis, numerosis, confertis; umbonibus albidis, approximatis, anticè adjectis; ligamenti aream angustâ, posticè lanceolato-acuminatâ.*

Conch. Icon. *Arca*, pl. 16. f. 105.

Hab. Basey, island of Samar, Philippines (found under stones at low water); Cuming.

The umbones in this species are very anteriorly situated.

ARCA BULLATA. *Arca testâ ovato-quadratâ, planiusculo-compressâ, lateribus supernè angulatis, antico infra rotundato, postico angulato-extenso; fuscescente, epidermide tenui, subsetosâ, setis in liris longitudinalibus adjectis, indutâ; radiatim costatâ, costis nodosis, costis lateralibus grandibus, distantibus, crenato-nodosis; ligamenti aream angustâ, elongatâ, declivi.*

Conch. Icon. *Arca*, pl. 16. f. 107.

Hab. ——?

The nodules of the radiating ribs are arranged in longitudinal rows with so much regularity, that the shell has all the appearance of being cancellated, the effect of which is increased by the bristles of the epidermis being deposited only between the nodules.

ARCA VOLUCRIS. *Arca testâ subquadratâ, gibbosâ, naviculari, lateribus supernè angulatis, antico infra rotundato, postico angulato, carinâ acutâ ab umbone ad marginem decurrente; albidâ, fusco sparsim tinctâ; striis elevatis longitudinalibus et transversis decussatâ, aream posticali costatâ, costis latiusculis, crenatis; umbonibus mucronatis, incurvatis; ligamenti aream latissimâ, nigro unimaculatâ.*

Conch. Icon. *Arca*, pl. 16. f. 109.

Hab. Island of Burias, Philippines (found under stones at low water); Cuming.

This species belongs to that division of the genus of which the *Arca Noæ* is the type, and is nearest allied to the *Arca imbricata*.

ARCA CŒLATA. *Arca testâ ovato-quadratâ, subcompressâ, latere antico brevissimo, rotundato, postico angulato, margine ventrali bysso hiante; albâ; radiatim costatâ, costis liris angustis elevatis eleganter clathratis, interstitiis profundè excavatis, costis medianis duplicatis, lateralibus confertim nodulosis; umbonibus anticè adjectis; ligamenti aream angustâ, profundè declivi.*

Conch. Icon. *Arca*, pl. 16. f. 110.

Hab. ——?

The sculpture of this shell is of the most exquisite description, and reminds one forcibly of the delicate embossed carving of the Chinese.

Digitized by Google

ARCA COMETA. *Arca testâ elongatâ, latere antico brevissimo, attenuato, rotundato, postico longissimo, plano-angulato; albidâ; radiatim striatâ, striis elevatis, posticis latioribus, prominentibus, distantioribus, subsquamosis; umbonibus anticè adjectis; ligamenti aream angustâ.*

Conch. Icon. *Arca*, pl. 16. f. 111.

Hab. Sorsogon, island of Luzon, Philippines; Cuming.

The posterior striæ acquire almost the importance of ribs.

ARCA OLIVACEA. *Arca testâ ovato-quadratâ, tenuiculâ, subæquilaterali, lateribus rotundatis; albidâ, epidermide olivaceo-fuscâ tenui corneâ indutâ; subtilissimè radiatim striatâ, striis numerosis, confertis; ligamenti aream mediocri, umbonibus subcentralibus.*

Conch. Icon. *Arca*, pl. 16. f. 113.

Hab. San Nicolas, island of Zebu (found in sandy mud at the depth of four fathoms); Cuming.

This shell is not much unlike the *Arca lactea* in general appearance; it will be found, however, on examination to be a much thinner and more delicate shell, whilst the umbones are sharper and more closely approximated.

ARCA MINUTA. *Arca testâ orbiculari-ovatâ, subæquivalvi, lateribus supernè angulatis, infra rotundatis; albidâ, subpellucidâ, epidermide tenui molli indutâ; radiatim striatâ; ligamenti aream latiusculâ, ligamento parvo, centrali.*

Conch. Icon. *Arca*, pl. 17. f. 112.

Hab. Philippine Islands (found in coarse sand at the depth of six fathoms); Cuming.

A very minute species, which cannot be referred to any hitherto described.

ARCA NAVICELLA. *Arca testâ quadrato-elongatâ, subcompressâ, lateribus supernè angulatis, antico infra rotundato, postico angulato, carinâ ab umbone ad marginem decurrente; radiatim striatâ; albidâ, fusco posticè sparsim strigatâ; ligamenti aream elongatâ.*

Conch. Icon. *Arca*, pl. 17. f. 114.

Hab. Calapan, island of Mindoro, Philippines (found in coarse sand at the depth of ten fathoms); Cuming.

This is a little species of the *Arca Noæ* or naviform group.

ARCA LATERALIS. *Arca testâ obliquè trapeziformi, lateribus supernè angulatis, antico brevissimo, postico latissimo, oblique expanso; radiatim costatâ, costis numerosis, angustis, crenatis, epidermide subpilosâ indutâ; ligamenti aream parvâ.*

Conch. Icon. *Arca*, pl. 17. f. 115.

Hab. Philippine Islands; Cuming.

The peculiarly oblique growth of this species renders it extremely interesting. The posterior side of the shell is radiated with lines of fine dark hair rising from between the crenulations of about every third rib.

ARCA SYMMETRICA. *Arca testâ subquadratâ, gibbosâ, lateribus*

Digitized by Google

supernè acutè angulatis, antico infra rotundato, postico angulato; viridescente; striis longitudinalibus et radiantibus crenulato-decussatâ; ligamenti aream latiusculâ, ligamento parvo, centrali.

Conch. Icon. *Arca*, pl. 17. f. 117.

Hab. Philippine Islands, bay of Manila; Singapore (found under stones at low water); Cuming.

The ligament of this species occupies only a very small diamond-shaped space between the umbones.

ARCA SCULPTILIS. *Arca testâ oblongo-quadratâ, lateribus supernè angulatis, infra obtuso-rotundatis; albâ; striis longitudinalibus et radiantibus elevatis subtilissimè clathratâ; ligamenti aream latiusculâ.*

Conch. Icon. *Arca*, pl. 17. f. 118.

Hab. Baclayon, island of Bohol, Philippines (found in sandy mud at the depth of seventeen fathoms); Cuming.

The engraved sculpture of this shell is of a more prominent character than that of the preceding species.

ARCA ZEBUENSIS. *Arca testâ subquadratâ, gibbosâ, lateribus supernè angulatis, infra obliquè rotundatis; fuscescente, epidermide molli indutâ; radiatim subtilissimè striatâ; ligamenti aream latiusculâ, ligamento parvo, centrali.*

Conch. Icon. *Arca*, pl. 17. f. 120.

Hab. Island of Zebu, Philippines (found under stones at low water); Cuming.

The ligament, as in the *Arca symmetrica*, occupies merely a small diamond-shaped space between the umbones.

ARCA STRIATA. *Arca testâ subquadrato-oblongâ, lateribus obtusè rotundatis; fuscescente, epidermide molli indutâ; radiatim striatâ, striis elevatis, confertis, posticis distantioribus; ligamenti aream latiusculâ, declivi.*

Conch. Icon. *Arca*, pl. 17. f. 121.

Hab. ——?

This shell approaches very nearly to the *Arca lactea*, but it is yet distinct; the posterior side is longer, it is a more compressed shell, and the posterior striæ are more widely spread.

ARCA PULCHELLA. *Arca testâ ovatâ, gibbosâ, lateribus supernè attenuatis, antico brevissimo; albâ; laminis longitudinalibus prominentibus, pulcherrimè fimbriatis, ornatâ; ligamenti aream anticè latiusculâ; umbonibus anticis.*

Conch. Icon. *Arca*, pl. 17. f. 122.

Hab. Algeria.

This species is well distinguished from any yet described by the very beautifully fimbriated longitudinal laminæ.

"Description of the *Felis Melanura*," by R. Ball, Esq., Secretary to the Royal Zoological Society of Ireland.

"*Felis melanura*, n. s.?—Size larger than the Margay, but proportionately slighter; on the fore-toes are longitudinal black stripes, on

Digitized by Google

the hind-toes spots. Three irregular narrow stripes of white on the sides, connected by anastomosing branches, divide the coloured part into island-like irregular spaces, which are black on the edges, shading into fulvous in the centre; these island-like spaces are spotted with black. The tail nearly touches the ground, is pointed and black, save at the under part near the anus, where it is marked with a little white, and shows as it were an imperfect attempt at annulation. The back is black, with a bright fulvous fleur-de-lis sort of marking on the neck; a narrow band of fulvous crosses below the scapulæ, from which run at right angles down the back to the rump two indistinct stripes of the same colour, about half an inch apart; the inside of the ears is fulvous, the outside black, with a white spot on each; the belly white, beautifully but irregularly spotted with black; a very distinct black band crosses the chest; a white spot on the lower eyelid and another longer on the upper; the cheeks are fulvous, striped with black; the forehead is fulvous, ornamented with black, two stripes of which run up the forehead from the eyes, parallel to each other; they are connected together above: immediately over the eyes are four longitudinal spots; above these may be traced three more irregular, and over these three, two, the three sets of spots being as it were ranged in ranks. The fulvous colour is chiefly confined to the fore-part of the animal. It was presented to the Royal Zoological Society of Ireland in the beginning of 1843 by Paymaster J. M'Creagh, of the 32nd Regiment. The foregoing description was taken in January 1844, and the animal was presented to the London Zoological Society in May 1844: when first obtained its colouring was very indistinct and confused; since the description was written some trifling change has taken place, particularly in the extension of the white on the tail, which makes the name not quite so applicable as it was."

Mr. Prichard read his paper "On the Crania of the Laplanders and Finlanders, with observations on the differences they presented from other European races."

"Little has hitherto been done to elucidate the physical characters of the Ugrian or Ugorian races, under which term late writers have comprised the Finns and Lappes, the Magyars or Hungarians, and several nations of Siberia*.

"This is owing to the fact that but few specimens of the skulls of these nations exist in any of the collections in Europe, and few and by no means perfect descriptions of them have been published. Blumenbach has given in his 'Decades Craniorum' a representation of the skull of a Lappe, and he describes it as approaching altogether to the Mongolian variety. Dr. Hueck gives an account of the appearance and general physical characters of the Esthonian Finns, and sums up his observations by pointing out some very considerable differences which he finds between them and the Mongolian form; in fact he says that he can discover nothing common to the Mongo-

* Der Ugrische Volkstamm von F. H. Müller.

Digitized by Google

lian and Esthonian skulls, except a certain squareness of figure, which is not constant.

"From these statements we should be led to suppose that there is a great difference between the skulls of the Finns and Lappes, and we should be inclined to adopt the opinion maintained by Lehrberg, that they are two separate and distinct races, his argument being founded upon the moral as well as the physical diversities between them*.

"On the other hand, the history of the people, and especially the great similarity of their languages, go far to prove a near relationship between the Finnish and Lappish nations; nor is a greater or less degree of civilization to be looked upon as a proof of diversity of origin, although it may be the cause of all the moral, and possibly of the physical differences also, which exist between the Finns and Lappes.

"From this uncertainty it becomes much more important to ascertain, by the examination of their skulls, what the physical characteristics of each nation are, and whether they exhibit any points of resemblance which may confirm the supposition that there is affinity between them, or whether, on the contrary, a sufficient degree of dissimilarity can be made out, from an accurate examination, to entitle us to set them down as separate races, and to class them with different grand divisions of the human species; whether, in short, these differences, if any such are found, are more than can be accounted for by the diversity of climate and modes of life which are well known long to have existed between them.

"The examination of these skulls for the purpose of furnishing an accurate description of their appearance is interesting in another point of view. In Scandinavia and in Denmark there are numerous tumuli which contain osteological remains of former inhabitants, and it is a disputed point whether they are the remains of a Finnish aboriginal stock or of Cimbrian or some unknown race, since they differ from the old German remains. Now if we could establish a correct notion of the Finnish description of skull, we should have no difficulty in deciding whether the remains before mentioned belonged to this stock.

"Having four specimens of these skulls, two of Finns and two of Laplanders, which my father has received through the kindness of Dr. Ilmoni and Mr. Daniel Wheeler, of Bristol, I have an opportunity of examining their peculiarities and of comparing them with each other and with the skulls of other Europeans, Chinese, American Indian, and the Esquimaux, the latter of which is a most remarkable specimen of the pyramidal and broad-faced skull.

"Upon taking a general view of these skulls, there are no remarkable features which strike us so forcibly as those which we see in the conformation of the Esquimaux. In fact, the only point worthy of

* Lehrberg, über die Wohnsitte der Jemen, ein Beitrag zur Geschichte Neu-Finnlands, in Untersuchungen zur Erlatiterung der alten Geschichte Russlands.

Digitized by Google

notice here, before we commence the particular description, is a degree of general breadth in the face superior to that which is seen in the European generally, which gives to the whole an appearance of squareness when the lower jaw is attached, and causes the actual shortness of the face, which is remarkable in these skulls, to become still more apparent. The general resemblance between the Finnish skulls and those of the Lappes is as strong as between four average European crania, even belonging to the same nation, and altogether their contour decidedly approaches what Blumenbach calls the Mongolian form of skull, the head appearing, as it has been noticed by an ocular observer, 'of the shape of a pent-house.'

"It will be found, however, that it is more especially in a close and minute examination that differences are seen to exist between the Lappes and Finns, on the one hand, and the European skulls on the other.

"Viewed from above and behind, there is a slight difference observable between the Finn and the Lappe: the posterior part of the Lappe is larger than the anterior, while the form of the Finn is more regular and rounded; that is, the line between the parietal protuberances exceeds the transverse diameter of the forehead more in the Lappe than in the Finn. I find, however, that there is equal difference in this respect between two European skulls even of the same nation. Again, from the same point of view the skulls of the Lappes present a central eminence or ridge, upon looking at the outline of the forehead (being the line of junction of the two halves of the frontal bone), which is much less marked, in fact scarcely discernible in the Finn, and altogether absent in the European, being on the contrary very strikingly prominent in the Esquimaux. Examined anteriorly, however, a general view of these skulls gives us exactly opposite results; for the sagittal suture, which is now the median line, and the continuation backwards of the frontal suture of early life, upon looking at the outline or horizon of the skull, is seen to project decidedly more in the Finn than in the Lappe; in both more than in other Europeans. Hence we may fairly lay down, that the skulls of the Finns and Lappes have (as far only as the vault of the cranium, exclusive of any effect produced by the width of the face, allows us to conclude,) more tendency to the pyramidal form than the European, but less than the Esquimaux.

"Examining these skulls anteriorly, taking into consideration the face, the triangular form is very evident, partly in consequence of the fact above mentioned respecting the vault of the cranium, and partly in consequence of the great width between the external surfaces of the malar bones, which in actual measurement in the two Lappes and the two Finns exceeds the length of the same diameter in other Europeans by at least half an inch, and in one case by nearly an inch, being equal to the same diameter in the Esquimaux; in the latter, however, which exhibits the pyramidal shape in a remarkable degree, the form is owing as much to the shape of the forehead as to the lateral projection of the anterior roots of the zygomatic processes. This width across the face is, as has been correctly observed

Digitized by Google

by Dr. Hueck, not owing to the increased breadth or altered shape in the malar bone, so much as to the altered width and direction of the malar process of the superior maxillary bone.

"The outline of the external surface of this bone, viewed from a point exactly in front of the skull; that is to say, the line which runs from the furthest molar tooth that is visible from this point to the suture connecting the malar and superior maxillary bones, is, in the generality of European crania, either vertical, or sometimes even inclined inwards and upwards in the first part of its course, afterwards turning outwards to form the commencement of the zygoma. In the Esquimaux this line runs obliquely upwards and outwards, at an angle of 45° from its commencement; and in the skulls of the Finns and Lappes it is intermediate to the two directions, being however still inclined outwards. This obliquity is also decidedly more marked in the Finns than in the Lappes.

"Upon this the anterior view, more of the lateral aspect of the lower jaw is seen than is ordinarily observed, in consequence partly of the greater distance between the condyles, which will be again noticed in the examination of the base of the skull, and partly from the fact that the angles project more in a lateral direction, the entire bone being apparently more developed than in other Europeans.

"With respect to some more minute points regarding these skulls, the superciliary ridges are well-marked, the ossa nasi, and the ascending processes of the superior maxillary bones present a flatter and broader anterior surface than the European, and the cavities and foramina are well-marked. [In all these four skulls the supraorbital opening for the frontal nerve and artery is a complete foramen upon the left side, and merely a notch upon the right.]

"In consequence of the greater width of the superior maxillary bone, the shape of the circumference of the orbit is not so round as in the generality of European skulls, where the external inferior angle is the lowest, but it is square, with the angles rounded; and for the same reason the space for the antrum is increased, while the depth of the infraorbital or canine fossa is very materially decreased: in one of the Finnish skulls this surface, from the inferior edge of the orbit to the alveolar processes, is almost plane. There is nothing remarkable in the nasal aperture. The shape of the orbit differs materially from that of the Esquimaux, where it is almost round, and from that in the skull of an Indian of the Sioux tribe, where it much resembles the European.

"The distance from the inferior edge of the nasal aperture, that is, from the anterior nasal spine to the margin of the alveolar process, is in every specimen of these skulls of the Finns and Lappes decidedly less than in any other European with which I have compared them. The teeth are much ground.

"A lateral view of these crania shows that the forehead is somewhat more receding than in the generality of Europeans, although the difference is not great, probably not more than is frequently seen between two specimens of the same tribe.

"The general shape of the head resembles that of the European

Digitized by Google

anteriorly, but the posterior part does not project so much. There is a marked difference between the posterior projection of the Finns and Lappes and that of the Esquimaux, the latter being much more prominent.

"The line which represents the outline of the ossa nasi, &c., *i. e.* the profile of the face of the skull, presents much less marked irregularities than the European in general. Thus although, as I have before observed, the superciliary ridges are well-marked, the frontal bone does not overhang the ossa nasi, as in the latter, where a decided angle is formed. In the Esquimaux the line from the forehead to the nose is nearly straight, and in the skulls of an Indian of the Sioux tribe and a Chitamache Indian the curve is very regular and open. The junction of the nose and forehead in the Lappes and Finns is therefore more angular than either of the three last-mentioned crania, but much less so than the European.

"Upon this the side view another remarkable fact is observed. The occipital bone being not so much developed downwards as in other Europeans (we observed just now that it had less posterior projection also), and the posterior edge of the lower jaw, from the condyle to the angle, being longer than in the latter, upon placing the skull upon a table or any plane horizontal surface, the inferior maxilla merely touches it by its angle, not resting upon the base of the jaw, as we observe in the English, Irish, ancient Irish (cast), Sioux, Italian and Mulatto skulls. The only ones which have this character in common with the Lappes and Finns are the Negro and the skull of a Hindu.

"The angle of the lower jaw is certainly more obtuse, seen upon comparing skulls in which the molar teeth remain perfect. In the form and direction of the coronoid process there seems to be no great difference.

"The temporal fossæ are well-marked, and in one of the Finnish skulls the anterior inferior angles of the parietal bones are connected to the great wings of the sphenoid by means of an os wormianum upon either side. This is not unfrequently the case in other crania.

"The general shortness of the face which has been observed to exist in these skulls, is more plainly seen by viewing them from the side, when we find that the inferior edge of the malar bone is very little higher than the edge of the alveolar process. This is owing not so much to the want of development downwards of these processes, although I have already noticed the shortness of the space between the nose and the mouth, but to the great breadth (from above downwards) of the malar bone, measured from its free inferior border to its junction with the external orbital process of the frontal bone; and it is a remarkable fact, that this measurement, in all the specimens of the skulls of Finns and Lappes, considerably exceeds that of any of the other specimens of European nations, and is equal to that of the Esquimaux and American skulls. The breadth of this surface of the malar bone in one Finn much exceeds that of any which I have had an opportunity of measuring.

"Thus the shortness of the face is more apparent upon the lateral

Digitized by Google

view of the cranium, in consequence of the additional width of the malar bone.

"The general shape of the basis cranii presents nothing very striking, with the exception of the zygomatic arches. The foramen magnum is of a more oval form than usual, and there appears to be scarcely as great a development of the occipital bone. This agrees with what we observed when considering the lateral aspect of these skulls, and with what has previously been noticed by Dr. Hueck respecting the space for the cerebellum, which, upon an examination of the interior of the cranium, is said to be small, in consequence of the slight concavity of the inferior occipital fossa. The condyles of the occipital bone are remarkably large, being, in three out of four of these skulls, an inch in the long axis, and in one of them (the Finn) longer. They are not unusually broad. This is not the case in any other European cranium which I have examined, but is seen in the Hindu, Chitamache Indian, and to a certain extent in the Esquimaux. There must doubtless have been a much greater freedom of motion backwards and forwards in these joints than is usually the case.

"The zygomatic arches, which are best seen at the base, are much more curved than in the other Europeans, slightly less so than in the Esquimaux; and the anterior projection of the alveolar processes beyond the anterior termination of the zygoma is also intermediate between the European and the Esquimaux.

"The glenoid cavities are flatter, more widely separated, and not so well-defined as in the European generally, and a difference corresponding to this is seen in the lower jaw, where the condyles, besides being more widely separated from one another, are also more rounded in form, allowing of a greater degree of lateral motion. In correspondence with this fact we also find that the pterygoid processes of the sphenoid bone, especially the external plates, are widened and enlarged, extending farther outwards, affording a greater space for the attachment of the pterygoid muscles, whose duty it is to perform the lateral or grinding motion in mastication. I mentioned above the corresponding fact of the teeth being much worn down.

"The ridges for the attachment of the muscles on the palate bone are well-marked, and viewed from below it is seen that the alveolar processes do not project so much from the horizontal part of the palate; that is, that the entire hard palate presents a general curve throughout, instead of being at first plane with a sudden bend, or almost an angle, which is seen at the point where the alveolar processes are given off in the generality of European skulls.

"These skulls of the Finns and Lappes are very solid and heavy.

"Although this description of the Finnish skulls corresponds in very many respects with that given by Dr. Hueck, yet the examination leads us to an exactly opposite conclusion, viz. that there are very many points in common between the Finn and the races characterized by the pyramidal-shaped skull, and the conclusion with regard to the Lappe corresponds to that which was published by Professor Blumenbach. We are hence able to lay down, that there is no important difference between the skulls of the Finns and Lappes, but that, on

Digitized by Google

the contrary, there is a very great resemblance between them; that altogether they are more nearly allied to the Hyperborean form than to the European; and that if any difference does exist between them, it is that the Finns approach more nearly to this conformation of skull than the Lappes."

Mr. Gould exhibited a specimen of an Australian Bird, which he described as follows:—

Podiceps Australis. *P. quoad colorem*, P. cristato *consimilis, at cristâ collari in medio latiùs et saturatiùs castaneâ, et ad apicem latiùs nigrâ.*

Crown of the head and occipital tufts black; frill black at the outer edge and chestnut in the centre, gradually passing into buffy white on the face; upper surface and wings dark brown; scapularies and secondaries pure white; all the under surface silvery white, stained with brown and chestnut on the flanks; irides red; bill dark horn-colour; upper surface of the tarsi and toes dark olive-green; under surface pale yellow.

Total length, 24 inches; bill, $2\frac{3}{4}$; wing, $7\frac{1}{2}$; tarsi, $2\frac{1}{4}$.

Hab. Australia and Van Diemen's Land.

Remark.—Nearly allied to *P. cristatus*, but differs in being somewhat larger in size, and in having the frill fuller and of a blacker hue than in that species.

Digitized by Google

August 27, 1844.

Richard C. Griffith, Esq., in the Chair.

Mr. Fraser read a description of a new species of Crowned Pigeon from New Guinea, now in the Gardens of the Society. In honour of Her Most Gracious Majesty, the Patroness of the Society, he proposed the name of

LOPHYRUS VICTORIA*. *L. ptilose saturatè cæruleo-griseâ; singulis plumis cristæ apice barbato cæruleo, albo marginato; pectore castaneo; tectricibus alarum majoribus cinereo-cæruleis, castaneo marginatis.*

The general colour of this species is an intense blue-grey, becoming lighter on the head; the chest is deep chestnut; the larger wing-coverts are light blue-grey, tipped with dark chestnut; the head is surmounted with a crest, each feather of which is of a similar construction as that of *Columbus coronatus*, but spreading into a spatulate form at the extremities, of a blue colour, bordered with white; there is also a dark mark passing through the eye; irides vermilion.

In size it is somewhat larger than *C. coronatus*.

Hab. New Guinea.

This lovely species is closely allied to *C. coronatus*, but differs from that bird in having terminal points to the crest-feathers, in the darker colouring, in having chestnut on the breast instead of the back and shoulders, and in having the larger wing-coverts pale blue-grey, terminated with chestnut, in the place of white, tipped with chestnut.

"Description of new species of *Ranella*," by Lovell Reeve, Esq.

RANELLA ALBIVARICOSA. *Ran. testâ oblongo-ovatâ, depressiusculâ, varicibus tuberculis subspinosis prominentibus armatis; anfractibus leviter angulatis, tuberculis subspinosis infra angulum biseriatim armatis, transversim elevato-striatis, infernè liratis, striis lirisque leviter undulatis, subtilissimè granulatis; albâ, rufescente-fusco tinctâ, varicibus niveis; aperturâ oblongo-ovali, utrinque canaliculatâ, fauce pallidè purpurascente; labro dentato et sulcato.*

Conch. Icon., *Ranella*, pl. 1. f. 2.

Murex rana, Linnæus; Martini, Conch., vol. iv. pl. 133. f. 1270–71.

Hab. Ceylon.

How comes it to pass that this common and peculiarly characteristic species has escaped the notice of so many good discriminating conchologists who have written on the genus?

* "*Lophyrus*, Vieill. (1816); *Goura*, Steph. (1819); *Megapelia*, Kaup (1836); *Ptilophyrus*, Swains. (1837)." G. R. Gray's 'Genera of Birds.'

Digitized by Google

RANELLA PUSTULOSA. *Ran. testâ ovatâ, subdepressâ, ponderosâ, castaneâ; anfractibus pustularum grandium seriebus duabus tribusve livido-castaneis cingulatis; varicibus granuloso-liratis; columellâ granuloso-rugosâ, rugis albidis; labro planissimè fimbriato, supernè sinuato, fusco, radiatim albisulcato.*

Conch. Icon., *Ranella*, pl. 3. f. 11.

Hab. Ascension Island.

This shell approximates so closely to the *Ranella cælata* in the style and character of its sculpture, that a specimen or two of different ages seem all that is necessary to exhibit a complete specific connection between them; it has however been demonstrated by the researches of two gentlemen of perhaps the greatest practical experience, Mr. Cuming and Mr. Hinds, that no species of shell common to the western coast of South America has ever been discovered on the coast of Africa.

RANELLA PONDEROSA. *Ran. testâ acuminato-ovatâ, crassâ, ponderosâ, varicibus valdè prominentibus; anfractibus supernè leviter angulatis, granulorum seriebus cingulatis, alternis granulis grandibus, bipartitis; rubido-fuscâ, lutescente; columellâ granulatâ et rugosâ; canali brevi, subrecurvo; labro plano-incrassato, granulato, supernè sinuato.*

Conch. Icon., *Ranella*, pl. 3. f. 14.

Hab. —— ?

The sculpture of this shell approaches very nearly to that of the *Ranella cælata*; it only requires however a slight examination of the specimens before me in different stages of growth, to see that they are specifically distinct.

RANELLA NOBILIS. *Ran. testâ oblongo-ovatâ, depressâ, crassiusculâ; spirâ acuminatâ, varicibus angustis, radiatim stellatis; anfractibus granuloso-liratis, præcipuè super varices, in medio tuberculatis, anfractu ultimo tuberculorum seriebus duabus armato; albidâ, fuscescente subtiliter maculosâ; columellâ fortiter rugosâ; aperturâ oblongâ, utrinque canaliculatâ, fauce albâ; labro fortiter rugoso.*

Conch. Icon., *Ranella*, pl. 4. f. 16.

Hab. —— ?

The form of this noble species is somewhat intermediate between that of the *Ranella pulchra*, or "Finned Frog," and the ordinary type of the genus, the varices exhibiting an indication of that peculiar star-like radiation common to the former, whilst the aperture is of an oblong canaliculated form, with the wrinkled lip and columella of the latter. The sculpture most resembles that of the *Ranella foliata*.

RANELLA CORIACEA. *Ran. testâ oblongo-ovatâ, depressiusculâ, spirâ subobtusâ, varicibus rotundatis; anfractibus undique creberrimè granulatis, transversim costatis, costis latis, interdum subobsoletis, irregulariter tumido-nodosis; aurantio-fuscescente; columellâ sparsim rugosâ; aperturâ ovatâ, utrinque leviter sinuatâ; labro intus radiatim denticulato.*

Digitized by Google

Conch. Icon., *Ranella*, pl. 6. f. 26.
Hab. —— ?

This interesting species, which Mr. Cuming possesses in different stages of growth, is the shell figured by Mr. G. B. Sowerby, jun., in the 'Conchological Illustrations' as a variety of his *Ranella scrobiculator* (*Triton scrobiculator*, Lamarck and others); I think, however, with M. Deshayes, that it is "*une coquille qui me paraît toujours différente; j'en ai vu plusieurs exemplaires et plusieurs figures, et j'ai observé des différences spécifiques constantes. Cette soi-disant variété a plutôt les caractères des Ranelles que le* Scrobiculator *proprement dit, et c'est sans doute ce qui explique pourquoi un certain nombre de conchyliologues veulent que le* Scrobiculator *soit une Ranelle. Pour nous, qui en avons vu l'animal, c'est un Triton.*" Note in new edition of Lamarck's Anim. sans vert., vol. ix. p. 626.

Ranella livida. *Ran. testâ ovato-turritâ, spirâ acuminatâ; anfractibus supernè depressis, ad suturam granulatis, infra lævibus, transversim noduloso-liratis, in medio tuberculorum seriebus duabus compressis armatis; lividâ, fuscescente variâ; columellâ subtiliter rugosâ; aperturâ ovatâ, utrinque sinuatâ; labro denticulato.*
Conch. Icon., *Ranella*, pl. 6. f. 28.
Ranella granifera, Kiener (not of Lamarck).
Hab. Island of Annaa, Pacific Ocean (found on the coral reefs); Cuming.

I do not see how M. Kiener can identify this tuberculated shell with Lamarck's description of *Ranella granifera*.

Ranella plicata. *Ran. testâ oblongâ, sub-Muriciformi; anfractibus rotundatis, scabris, longitudinaliter plicatis, in medio nodulosis; livido-olivaceâ, zonâ albidâ in medio cinctâ; columellâ lævi, canali longiusculo.*
Conch. Icon., *Ranella*, pl. 7. f. 33.
Hab. —— ?

The plicated growth of this shell is developed with the neatest regularity from the apex to the margin.

Ranella venustula. *Ran. testâ ovatâ, crassiusculâ, varicibus valdè obliquis; anfractibus transversim costatis, granulatis et punctatis, supernè angulatis, prope suturam corrugatis, ad angulum fortiter tuberculatis; columellâ excavatâ, nigricante-purpureâ, albigranulosâ; aperturâ rotundâ, utrinque canaliculatâ, fauce roseo-purpureâ; labro incrassato, nigro-purpureo.*
Conch. Icon., *Ranella*, pl. 7. f. 37.
Hab. —— ?

This species is remarkably characterized by its rich dark purple columella granulated with white.

Ranella siphonata. *Ran. testâ ovatâ, crassiusculâ, varicibus perspicuè canaliculatis; anfractibus transversim rudè costatis et tuberculatis, undique granulatis et punctatis, prope suturam corrugatis; luteolâ; columellâ vix rugosâ, roseo-purpurascente; aper-*

Digitized by Google

turâ rotundâ, fauce roseo-purpurascente, utrinque canaliculatâ, canali supero valdè elato-siphonato.

Var. *β. Testâ albâ aut luteolâ, nigro-cærulescente fasciatâ et punctatâ; columellâ albâ, aperturæ fauce albâ.*

Conch. Icon., *Ranella*, pl. 7. f. 38.

Hab. Philippine Islands; Cuming.

I take this shell to be quite distinct from the dark variety of the *Ranella bufonia* to which it is allied.

RANELLA TUBEROSISSIMA. *Ran. testâ ovatâ, varicibus perspicuè canaliculatis; anfractibus transversim rudè costatis, dorsim tuberosissimis, undique granulatis et punctatis, prope suturam corrugatis; albidâ, nigro-cærulescente punctatâ; columellâ lævi, croceâ; aperturâ rotundâ, vividè croceâ, utrinque canaliculatâ; canali supero elato-siphonato, supernè intus nigricante tincto; labro fortiter dentato.*

Conch. Icon., *Ranella*, pl. 7. f. 39.

Hab. Philippine Islands; Cuming.

An extraordinary humped shell with a yellow mouth.

RANELLA TRIQUETRA. *Ran. testâ elongato-Muriciformi, varicibus supernè mucronatis; anfractibus angulatis, ad angulum tuberculatis, supra lævibus, infra obsoletè liratis; livido-olivaceâ; columellâ lævi; canali longiusculo; aperturâ parvâ; labro vix denticulato.*

Conch. Icon., *Ranella*, pl. 7. f. 41.

Hab. San Diego, California; Nuttall.

Quite distinct in my opinion from the *R. Muriciformis*, which is a flat pinnated shell.

RANELLA HASTULA. *Ran. testâ parvulâ, sublanceolatâ, depressâ, ancipiti; anfractibus transversim granoso-striatis, lamellis elevatis indistinctè diadematis; castaneo-fuscâ; columellâ lævi; canali brevi, recurvo; aperturâ parvâ.*

Conch. Icon., *Ranella*, pl. 8. f. 42.

Hab. ——?

This little dark granulated shell, though less pyramidal, is of similar structure to the *Ranella anceps.*

RANELLA ROSEA. *Ran. testâ pyramidali-ovatâ, varicibus subobliquis; anfractibus supernè leviter angulatis, transversim striatis, undique seriatim tuberculato-nodulosis, nodulis ad angulum bipartitis; vividè coccineo-roseâ, nodulis luteis; canali breviter recurvo, aperturâ parvâ.*

Conch. Icon., *Ranella*, pl. 8. f. 46.

Hab. Island of Ticao, Philippines; Cuming.

This pretty little species exhibits a very agreeable contrast of colour, namely, yellow nodules upon a bright scarlet-rose ground.

RANELLA CUSPIDATA. *Ran. testâ acuminato-ovatâ, crassiusculâ, solidâ, varicibus obliquis; anfractibus transversim noduloso-liratis, tuberculis duobus obtusis inter varices ornatis; albidâ, luteo-*

Digitized by Google

aurantio plus minusve tinctâ; columellâ lævi; canali breviusculo, recurvo; aperturâ parvâ, ovato-rotundatâ.

Conch. Icon., *Ranella*, pl. 8. f. 48.

Hab. Islands of Capul and Ticao, Philippines; Cuming.

This shell has somewhat the form and general character of the *Ranella bitubercularis*, though it is of more solid growth and of a peculiar orange-yellow colour.

"A continuation of a paper by Sylvanus Hanley, Esq., on new species of the genus *Tellina*, chiefly collected by Hugh Cuming, Esq. in the Philippine Islands and Central America":—

TELLINA RODON. *Tel. testâ oblongâ, tenuissimâ, compressiusculâ, lævi, nitidissimâ, roseâ, pellucidâ, valdè inæquilaterali, utrinque rotundatâ; margine ventrali convexiusculo; dorsali anticè vix declivi et convexiusculo, posticè subdeclivi; latere postico brevi, subattenuato; flexurâ obsoletâ; dente laterali approximato, antico.* Long. 0·38; lat. 0·83 poll.

Hab. ——? Mus. Cuming.

Allied to *coccinea*, but more elongated and glossy.

TELLINA LUX. *Tel. testâ subovali, tenui, pellucidâ, compressâ, nitidâ, aurantiâ, sublævigatâ, inæquilaterali; margine ventrali convexiusculo; dorsali utrinque subdeclivi, anticè convexiusculo, posticè brevi et incurvato; latere postico breviore obtusissimè biangulato; extremitate anticâ obtusè rotundatâ; flexurâ nullâ; dente laterali antico, approximato, distincto.* Long. 0·55; lat. 0·80 poll.

Hab. Philippines. Mus. Hanley.

Two specimens of this rare shell, which possesses the general appearance of *T. psammotella*, were selected by me from a large number of *T. Philippinarum*.

TELLINA HILARIS. *Tel. testâ oblongo-cuneiformi, tenui, compressiusculâ, inæquilaterali, nitidâ, lævi, roseâ, albo biradiatâ; radiis latis, submediis; margine ventrali convexiusculo; dorsali anticè declivi, posticè subrecto et valdè declivi; extremitate lateris antici longioris rotundatâ; extremitate posticâ brevi, cuneiformi; flexurâ obsoletâ; dente laterali unico, parvo, subapproximato.* Long. 0·37; lat. 0·62 poll.

Hab. ——? Mus. Cuming.

Possessing the general contour of *T. tenera*, but more elongated and wedge-shaped. The colouring is rich and peculiar, being deep rose-colour, adorned with two broad white rays, one leaning forwards and the other with a posterior inclination. I suspect it comes to us from the Philippine Islands.

TELLINA JUVENILIS. *Tel. testâ ovato-subtrigonâ, tenui, pellucidâ, nitidâ, compressiusculâ, rubro-aurantiâ, lævigatâ, inæquilaterali; margine ventrali convexo aut convexiusculo; dorsali anticè subrecto declivi, posticè convexo et valdè declivi; latere antico longiore, subattenuato, rotundato; postico brevi et obtusè subcuneiformi;*

Digitized by Google

costâ umbonali et flexurâ subobsoletis; dente laterali parvo, antico. Long. 0·45; lat. 0·60 poll.

Hab. Philippines.

Closely resembling the Mediterranean variety of *T. tenuis*.

TELLINA VESTALIS. *Tel. testâ oblongo-angustâ, tenuissimâ, convexiusculâ, nitidâ, lævi, intus extusque nivea, inæquilaterali; margine ventrali subrecto, paululùm convexiusculo; dorsali anticè minimè declivi et paululùm convexiusculo, posticè prope ligamentum excavato, deindè declivi; extremitate lateris antici longioris rotundatâ; extremitate posticâ subemarginatâ, subattenuatâ, obtusè biangulatâ; flexurâ obsoletâ; dente laterali antico, approximato.* Long. 0·60; lat. 1·13 poll.

Hab. Isle of Negros; in coral sand, at seven fathoms: isle of Luzon; in sandy mud, at six fathoms.

Closely allied to the *Tellinides truncatulus* of Sowerby.

TELLINA VERNALIS. *Tel. testâ subovali, tenuissimâ, compressiusculâ, pellucidâ, lævi, nitidissimâ, albido-roseâ, valdè inæquilaterali, utrinque rotundatâ; margine ventrali convexiusculo; dorsali utrinque paululùm convexiusculo, posticè declivi, anticè vix minimè declivi; latere antico producto, postico brevi; flexurâ obsoletâ; dente laterali minimo, antico, subapproximato.* Long. 0·40; lat. 0·63 poll.

Hab. Singapore; soft sandy mud, at seven fathoms.

The outline is somewhat similar to *T. lux*, and both the texture and colouring are most delicate.

TELLINA SPECTABILIS. *Tel. testâ ovato-trapeziformi, subtenui, ventricosâ, maximè inæquilaterali, impolitâ, intus extusque albidâ, concentricè striatâ; striis rugosis, elevatis, tenuibus; margine ventrali paululùm convexo; dorsali anticè convexo et declivi, posticè recto aut subincurvato et maximè declivi; extremitate lateris antici longioris obtusâ; extremitate posticâ truncato-cuneiformi, obtusè biangulatâ; costâ umbonali et flexurâ conspicuis; ligamento magno, haud prominente; dentibus primariis minimis, lateralibus nullis.* Long. 2·15; lat. 2·75 poll.

Hab. Bay of Manila and island of Siquijor; on coral sand, at low water. Mus. Cuming, Hanley.

Allied to the *ephippium* of Spengler, but easily distinguished by the extreme disparity of its sides.

TELLINA GRANDIS. *Tel. testâ ovali, subtrigonâ, solidâ, convexâ, subinæquivalvi, lævi, subimpolitâ, intus extusque albidâ, anticè rotundatâ; margine ventrali convexiusculo; dorsali utrinque declivi, posticè recto aut subrecto, anticè vix convexiusculo; extremitate lateris antici brevioris obtusâ; flexurâ costâque umbonali subobsoletis; ligamento magno; dentibus lateralibus nullis.* Long. 2·40; lat. 3·30 poll.

Hab. Tumbez, Peru.

A large species, which assumes the appearance of a *Lutraria*. An

Digitized by Google

extremely thin greenish ashy epidermis is perceptible near the lower margin.

TELLINA BRUGUIERI. *Tel. testâ rotundato-trigonâ, solidâ, subæquilaterali, convexâ, impolitâ, intus extusque albidâ, sublævigatâ, anticè obtusâ, posticè rotundatâ; margine ventrali convexo aut subarcuato; dorsali posticè elevatiore, valdè declivi et paululùm convexo, anticè arcuato et declivi; natibus prominentibus, anticè incumbentibus; flexurâ costâque umbonali obsoletis; ligamento infosso; lunula parvâ; dentibus primariis maximis, lateralibus nullis.* Long. 1·50; lat. 1·80 poll.

Hab. Ilo-Ilo, isle of Panhay; hard sand.

This species is evidently represented at plate 231. figure 2. of the 'Encyclopédie Méthodique,' but as no name accompanies the delineation, I have assigned to it its present one, in honour of the illustrious author of the letter-press to that work.

TELLINA GUBERNACULUM. *Tel. testâ subovatâ, subinæquivalvi, tenui, compressiusculâ, lævi, extus intusque albidâ, valdè inæquilaterali; margine ventrali convexiusculo, anticè sursum acclinante; dorsali, anticè magis minusve convexo et declivi, posticè recto brevi, et subito declivi; extremitate lateris antici longioris attenuato rotundatâ; extremitate posticâ brevissimâ, truncato-cuneiformi; flexura costâque umbonali obsoletis; ligamento infosso; dentibus primariis parvis, lateralibus nullis.* Long. 1·45; lat. 1·90 poll.

Hab. Real Llejos, Central America; in sandy mud, seven fathoms.

Closely allied to the *truncata* of Jonas, but that species is much thicker and its shorter extremity simply wedge-shaped.

TELLINA FORMOSA. *Tel. testâ obovatâ, convexiusculâ, valdè inæquilaterali, albidâ, radiis interruptis roseis, striisque minutis confertis obliquis, undique ornatâ; margine ventrali convexo; dorsali utrinque convexiusculo, anticè subdeclivi, posticè valdè declivi; extremitate lateris antici producti rotundatâ, postici brevissimi obtusissimè angulatâ; flexurâ subobsoletâ; dentibus lateralibus nullis.* Long. 0·43; lat. 0·55 poll.

Hab. Daleguete, Zebu; sandy mud at ten fathoms.

The absence of lateral teeth, the general shape, the brilliant colouring and minute oblique striæ, unite in rendering this unique shell easily distinguishable from any species of this genus.

TELLINA SOL. *Tel. testâ oblongo-ellipticâ, solidiusculâ, compressâ, nitidâ, rubro-aurantiâ, alterâ in valvulâ concentricè substriatâ, alterâ sublævigatâ; margine ventrali convexo, posticè sursum acclinante; dorsali utrinque subdeclivi, convexiusculo; latere antico longiore, ad extremitatem rotundato; extremitate posticâ in junioribus subacuminatâ, in adultis obtusè angulatâ; natibus planulatis; ligamento infosso; dente laterali unico, antico, distincto.* Long. 2·40; lat. 4·25 poll.

Hab. —— ? Mus. Cuming, Metcalfe.

This truly magnificent shell unites the aspect of the *acuta* of Wood to the brilliant hues of *T. foliacea*. The concentric striæ are ex-

Digitized by Google

tremely fine and regular, but become stronger and more decided towards the lower margin, where obsolete radiating lines are likewise perceptible. The smoother valve of Mr. Cuming's superb specimen is rayed with paler streaks, but this is not the case in the few other specimens I have ever beheld of this gorgeous species. The apex is colourless and not rosy as in *acuta*.

TELLINA VIRGO. *Tel. testâ ovato-oblongâ, tenuissimâ, planulatâ, nitidissimâ, niveâ, pellucidâ, striis obliquis flexuosis subremotis in valvulâ utráque ornatâ; margine ventrali convexiusculo; dorsali antico magis minusve declivi, convexo; latere postico breviore, subcuneiformi; flexurâ costáque umbonali obsoletis; ligamento satis prominente; dente laterali antico, parvo, subapproximato.* Long. 0·55; lat. 0·92 poll.

Hab. —— ? Mus. Cuming.

Allied to the *Iris* of Say, but much larger. The remote oblique striæ entirely cease before arriving at the hinder extremity. It is the most pellucid and glassy-looking bivalve I am acquainted with.

TELLINA IMBELLIS. *Tel. testâ ellipticâ, inæquivalvi, solidiusculâ, extus intusque albidâ, nitidâ, valdè inæquilaterali; alterâ valvulâ lævi, complanatâ; alterâ convexâ et lineis concentricis elevatis, posticè striatâ; margine ventrali convexo; dorsali antico convexiusculo et paululùm declivi; extremitate lateris antici longioris rotundatâ; extremitate posticâ obtusè angulatâ; ligamento prominente; flexurâ nullâ; dente laterali antico, minimo, approximato.* Long. 0·90; lat. 1·50 poll.

Hab. —— ?

Closely resembling a *Psammobia*, the minute lateral tooth being scarcely visible.

TELLINA VALTONIS. *Tel. testâ ovato-oblongâ, fragili, complanatâ, subinæquilaterali, nitidissimâ, pellucidâ, roseâ, radiis geminis albidis posticè ornatâ, lineisque minutis concentricè substriatâ; margine ventrali convexiusculo; dorsali antico subdeclivi, convexo; extremitate posticâ paululùm breviore, vix rotundato-angulatâ; flexurâ, costáque umbonali, obsoletis; dente laterali antico, parvo, subapproximato.* Long. 0·53; lat. 0·72 poll.

Hab. —— ? Mus. Metcalfe.

I have named this shell in honour of W. Walton, Esq., whose rich collection has proved of great service to me in my investigation of the very numerous species of this beautiful genus. It differs from *exilis* by the absence of regular suboblique striulæ and by the hinder extremity not being decidedly wedge-shaped.

TELLINA FRIGIDA. *Tel. testâ ovali, solidiusculâ, convexâ, inæquilaterali, nitidâ, albidâ (intus candidâ), lævigatâ, utrinque rotundatâ; margine ventrali convexo; dorsali antico, subdeclivi, convexo; latere postico planè breviore; natibus inconspicuis; flexurâ, costáque umbonali, obsoletis; dentibus primariis minimis, lateralibus nullis.* Long. 0·70; lat. 1 poll.

Hab. Kamtschatka. Mus. Petit, Hanley.

I am indebted to M. Petit de la Saussaye for the possessionof this

Digitized by Google

rare species. It is closely allied to the *edentula* of Sowerby, but the beaks are more prominent in that species, and its posterior termination more angular.

TELLINA ELONGATA. *Tel. testâ oblongo-angustâ, subtenui, subventricosâ, intus extusque albâ, lævigatâ, valdè inæquilaterali, anticè rotundatâ; margine ventrali medio subretuso, anticè sursum acclinante; dorsali anticè convexiusculo et vix paululùm declivi, posticè producto, recto aut subretuso satisque declivi; latere postico brevi, truncato-acuminato hiante; ligamento subinfosso; flexurâ subobsoletâ; dentibus lateralibus nullis.* Long. 1·12; lat. 2·20 poll.

Hab. Chiquiqui, West Columbia; in sand at three fathoms.

The extremely narrow shape, and the peculiarity of its upper and lower edges being almost parallel, separate it from the majority of its section; it is however closely allied to the succeeding species.

TELLINA ASSIMILIS. *Tel. testâ* T. elongatæ *simillimâ, sed magis ventricosâ, et extremitate posticâ contortâ, subrostratâ.* Long. 0·45; lat. 0·95 poll.

Hab. Isle of Luzon; in sandy mud, six fathoms.

TELLINA INORNATA. *Tel. testâ ovato-oblongâ, subtenui, subventricosâ, impolitâ, subæquilaterali, sordidè albidâ, epidermide tenui et cinereâ indutâ, lævigatâ; marginis ventralis parte mediâ rectâ aut subretusâ; dorsalis parte anticâ convexiusculâ et paululùm declivi, parte posticâ subdeclivi; extremitate anticâ rotundatâ, posticâ attenuato-rotundatâ; flexurâ, costâque umbonali, obsoletis; dentibus lateralibus nullis.* Long. 0·82; lat. 1·30.

Hab. Conception, Chili; soft mud, six fathoms.

A fossil-like shell, which is devoid of striking characteristics, and much resembles an elongated *Edentula*.

TELLINA CYGNUS. *Tel. testâ ovatâ aut ovato-oblongâ, solidiusculâ, subæquilaterali, convexâ, extus nitidâ, intusque candidâ, concentricè substriatâ; margine ventrali convexiusculo; dorsali anticè subrecto et paululùm declivi, posticè recto et valdè declivi; extremitate anticâ rotundato-obtusâ, posticâ cuneiformi, subrostratâ; flexurâ ventrali distinctâ; ligamento infosso; superficie internâ submargaritaceâ; dentibus lateralibus nullis.* Long. 0·40; lat. 0·63 poll.

Hab. Bias, isle of Negros; coral sand, seven fathoms.

Closely resembling *corbuloides* in shape, but narrower, possessing distinct concentric striæ, and devoid of lateral teeth.

TELLINA DOMBEI. *Tel. testâ obovatâ, inæquilaterali, solidâ aut solidiusculâ, convexâ aut subventricosâ, impolitâ, lævigatâ, albidâ, natibus roseo tinctis; margine ventrali subrecto; dorsali anticè subdeclivi et convexo, posticè subrecto satisque declivi; extremitate anticâ rotundatâ, posticâ brevi, subangulatâ; ligamento infosso; costâ umbonali et flexurâ distinctis; disco interno aurantio-roseo; dentibus lateralibus nullis.* Long. 1·60; lat. 2 poll.

Hab. Panama; twelve fathoms, sandy mud.

Allied to the *umbonella* of Lamarck, but with the fold and flexure more distinctly marked.

Digitized by Google

September 10, 1844.

William Horton Lloyd, Esq., in the Chair.

A communication was read from George Gulliver, Esq., F.R.S. &c., containing additional measurements of the Blood-corpuscles of Mammalia and Birds. No. 3.*

The measurements, as in all my former ones of the blood-corpuscles, refer exclusively, unless otherwise mentioned, to the red particles or discs. The diameters, as usual, are given in vulgar fractions of an English inch; and as the numerator is always 1, it is left out, the denominators only being printed. Other particulars are explained at the head of my former communications.

Ratel (*Mellivora Capensis*, F.Cuv.).

4000
3572
3600
5333
3200

3824

Blood from a prick of the nose of a female, half-grown.

Fin-back Whale (*Balæna Boops*).

3200
3000
4570
2666

3099

I do not know that the blood-discs of any whale have been before measured. They are, like those of the porpoise, of the common circular form. Those of the whale are but slightly larger than the human blood-corpuscles, and decidedly smaller than those of the elephant and sloth.

The measurements were made from some rather imperfect specimens of the dried corpuscles, for which I am indebted to that excellent anatomist Mr. J. Quekett.

Gayal (*Bos Sylhetanus*, F. Cuv.).

4570
4000
6000
3200

4222

Blood from a vein of the ear.

Aoudad (*Ovis Tragelaphus*, Desm.).

6665
6400
6000
8000
5333

6355

Blood from a prick of the lip and from a vein of the ear of a fine adult male. The corpuscles are smaller than those of the mouflon and of the common sheep, being most nearly allied in minuteness to the corpuscles of the

* No. 2 will be found in the Proc. Zool. Soc., Feb. 13th, 1844; and No. 1 in the same Proceedings, Dec. 13th, 1842.

Digitized by Google

goat. The present measurements having been made from good samples of fresh blood, are probably better than my former measurements (Lond. and Edin. Phil. Mag. Jan. 1841, p. 31) of the corpuscles obtained from the heart of an Aoudad fifteen hours after death, when the discs may have been somewhat swollen.

Malabar Squirrel (*Sciurus maximus*, Schreb.).

4000
3555
3200
5333
2900

3633

Blood from a prick of the nose.

Two-toed Sloth (*Bradypus didactylus*, Linn.).

Average 2865, being the largest corpuscles, next to those of the elephant, yet known among mammals; measurements detailed in the Proceedings of the Zool. Soc., June 11th, 1844. Blood from a prick of the nose and from the lip.

Hairy Armadillo (*Dasypus villosus*, Desm.).

3330
3200
4572
2666

3315

Blood from a prick of the foot of a male.

Billardier's Kangaroo (*Halmaturus Billardieri*, Gould).

4000
3200
4800
3000

3623

Blood from a prick of the nose of a male.

Swift Kangaroo (*Macropus ocydromus*, Gould).

3555
3200
4570
2900

3442

Blood from a prick of the nose of a female.

Trumpeter (*Psophia crepitans*, Linn.).

L.D.	S.D.
2000	3555
1777	3200
2286	4800
1600	2900
1883	3488

Blood from a vein of the pinion.

Crested Lapwing (*Vanellus cristatus*, Temm.).

L.D.	S.D.
1895	3200
2400	4572
1714	2666
1964	3310

Blood from a vein of the pinion.

Continuation of a paper on the new species of the genus *Tellina*, by Sylvanus Hanley, Esq.:—

Tellina miles. *Tel. testâ* T. cuspidi *affini, sed oblongâ, rostratâ, et magis compressâ; margine antico dorsali vix paululùm declivi; ventrali convexo; valvulâ alterâ lineis elevatis concentricis undique striatâ.* Long. 0·90; lat. 1·88 poll.

Digitized by Google

Hab. ——? Mus. Metcalfe.

A beautiful shell, which reminds one slightly of the *rosea* of Spengler, and closely resembles a produced and flattened specimen of *Tellina cuspis*.

TELLINA LILIUM. *Tel. testâ ovato-oblongâ, tenuiusculâ, subventricosâ, extus intusque albâ, concentricè substriatâ; striis supra costam umbonalem elevatis; margine ventrali subrecto; dorsali anticè subrecto paululùmque declivi; latere antico producto, infernè ad extremitatem obliquè rotundato; latere postico, brevi, cuneiformi; dentibus lateralibus nullis.* Long. 0·50; lat. 0·80 poll.

Hab. Isle of Burias, sandy mud, low water; and isle of Negros, coral sand, seven fathoms: Cuming.

One of the many species which are destitute of any striking characteristics.

TELLINA PLEBEIA. *Tel. testâ subovatâ, convexâ, lævigatâ, intus extusque albidâ, umbonibus hyalinis et rubro-aurantiis; margine ventrali convexo aut subarcuato; dorsali, anticè prope nates recto et paululùm declivi, posticè recto satisque declivi; latere antico longiore, rotundato; extremitate posticâ obtusè angulatâ; ligamento infosso; dentibus lateralibus nullis.* Long. 1·15; lat. 1·70 poll.

Hab. Real Llejos, Central America; sandy mud, seven fathoms.

Very closely allied to the *umbonella* of Lamarck.

TELLINA AURORA. *Tel. testâ* T. Psammotellæ *simillimâ, convexiore autem, et umbonibus rubro-aurantiis; ligamento infosso; dentibus lateralibus nullis.* Long. 0·75; lat. 1·23 poll.

Hab. Panama; soft sandy mud, ten fathoms: Cuming.

Both this and the succeeding species are not unlike Chemnitz's figure of *T. oblonga*, but the description by no means accords.

TELLINA LUCERNA. *Tel. testâ oblongâ, subventricosâ, lævigatâ, albidâ, umbonibus aurantiis, anticè longiore et rotundatâ, posticè obtusè cuneiformi; margine ventrali subrecto; dorsali, anticè paululùm et posticè satis declivi, utrinque subrecto; ligamento subinfosso; disco interno aurantio; dentibus lateralibus nullis.* Long. 0·90; lat. 1·42 poll.

Hab. Isle of Negros and Isle of Misamis; sandy mud, low water: Isle of Panay, hard sand: Cuming.

TELLINA SCALPELLUM. *Tel. testâ oblongâ, tenuissimâ, compressâ, nitidissimâ, valdè inæquilaterali, roseâ, pellucidâ, sublævigatâ; margine ventrali subrecto; dorsali antico paululùm declivi et subrecto; latere postico brevi et obtusè subcuneiformi; extremitate anticâ rotundatâ; ligamento parvo, prominulo; dentibus lateralibus nullis.* Long. 0·25; lat. 0·50 poll.

Hab. Isle of Zebu; sandy mud, low water: Cuming.

More produced than in the majority of the smaller species, and of a peculiarly deep rose-colour.

TELLINA DIANA. *T. testâ* T. Galatheæ *simillimâ, subovatâ autem,*

Digitized by Google

punctisque nullis; margine dorsali etiam utrinque magis declivi, ventrali convexiore, et extremitate posticâ magis obtusâ. Long. 1·05; lat. 1·50 poll.

Hab. Java? Mus. Hanley, &c.

TELLINA ANCILLA. *Tel. testâ oblongo-elongatâ, convexiusculâ, nitidissimâ, candidâ, concentricè substriatâ, lineisque obsoletis radiantibus ornatâ; striolis supra costam umbonalem subobsoletam, remotioribus, distinctis, subimbricatis; margine ventrali subrecto; dorsali, anticè subdeclivi et convexiusculo, posticè subrecto et declivi; latere antico producto; postico obtusè cuneiformi; dentibus lateralibus nullis.* Long. 0·45; lat. 1 poll.

Hab. Lord Hood's Island, on fine coral-sand: Cuming.

TELLINA HIBERNA. *Tel. testâ oblongâ, solidâ, compressiusculâ, valdè inæquilaterali, subnitidâ, candidâ, lævigatâ; margine ventrali subrecto; dorsali anticè convexiusculo et paululùm declivi, posticè primùm convexo deinde subincurvato; latere antico producto; postico brevi, cuneiformi; ligamento prominulo; dente laterali antico magno, approximato.* Long. 0·45; lat. 0·75 poll.

Hab. Panama and Bay of Guayaquil; six to eleven fathoms, in sandy mud: Cuming.

Closely allied to *T. polita.*

TELLINA DESHAYESII. *Tel. testâ* T. Spengleri *simillimâ, sed albido-roseâ, et lamellis subremotis concentricè ornatâ; margine etiam ventrali magis convexo.* Long. 0·60; lat. 1·55 poll.

Hab. Red Sea? Mus. Cuming, Deshayes.

However closely resembling *T. Spengleri,* it is nevertheless with facility to be distinguished by its regular (and not oblique) concentric lamellæ.

TELLINA TULIPA. *Tel. testâ* T. Donacinæ *simillimâ, sed subæquilaterali, et margine dorsali rosei coloris experte.* Long. 0·50; lat. 0·95 poll.

Hab. ——? Mus. Cuming, Walton.

Extremely like *T. Donacina,* but almost equilateral, and devoid of the short vertical ray at the beaks and the rosy dorsal edges which are characteristic of that species.

TELLINA PHARAONIS. *Tel. testâ* T. rostratæ *simillimâ, sed solidâ, lineisque elevatis concentricè striatâ; umbonibus aurantio-roseis; sinu postico distincto.* Long. 1·20; lat. 3·20 poll.

Hab. Red Sea. Mus. Metcalfe.

This magnificent shell is one of the first fruits of the recent systematic investigation of the fauna of the Red Sea.

TELLINA SPINOSA. *Tel. testâ ovatâ, solidiusculâ, impolitâ, inæquilaterali, convexiusculâ, extus intusque albidâ, striis minutis confertissimis elevatis, concentricè asperatâ; margine ventrali arcuato, posticè sursum acclinante; dorsali posticè elevatiore convexo et declivi, anticè prope nates acutas subincurvato deinde subrecto et*

Digitized by Google

subdeclivi; latere postico brevi; extremitate anticâ rotundatâ; posticâ seriebus duabus vel tribus radiantibus spinarum serratâ; lunulâ parva, distinctâ; ligamento infosso; dente laterali antico subapproximato, postico remoto. Long. 0·60; lat. 0·80 poll.

Hab. Isle of Ticao, six fathoms.

Mr. Cuming's unique specimen of this curious shell possesses characters which cannot readily be confounded with any other species. It is to *Gargadia*, however, that it is most allied.

TELLINA FIMBRIATA. *Tel. testâ obovato-rotundatâ, solidâ, convexâ, candidâ, striis concentricis confertissimis lamellosis fimbriatis, et lineis radiantibus confertis, decussatâ; margine ventrali arcuato, posticè sursum acclinante; dorsali utrinque convexiusculo, anticè subdeclivi, posticè valdè declivi; latere antico longiore, rotundato; extremitate posticâ brevi, angulatâ; costâ umbonali valdè conspicuâ; ligamento infosso; lunulâ distinctâ; dentibus lateralibus subremotis, subæquidistantibus.* Long. 1·25; lat. 1·42 poll.

Hab. ——? Mus. Cuming.

In sculpture not unlike *T. decussata*; in form more akin to *T. ostracea*.

TELLINA SUBTRUNCATA. *Tel. testâ obovatâ, valdè inæquilaterali, albidâ, striis lamellosis fimbriatis confertissimè ornatâ; margine ventrali anticè arcuato, posticè subrecto et sursum acclinante; dorsali utrinque magis minusve convexo, anticè declivi, posticè maximè declivi; extremitate anticâ rotundatâ; latere postico brevissimo, subtruncato, angulato; ligamento infosso; dentibus lateralibus subæquidistantibus.* Long. 0·60; lat. 0·75 poll.

Hab. Isle of Bohol; on the reefs, low water.

I had almost regarded the first specimen of this rare shell in Mr. Cuming's collection as a monstrosity, but the examination of another specimen in Sir Edward Belcher's cabinet has satisfied me that the seemingly diseased and stunted appearance is characteristic and not accidental.

TELLINA PERPLEXA. *Tel. testâ* T. ostraceæ *affinis, subovatâ autem, striisque ejus concentricis, magis confertis et supernè haud lamellosis; margine dorsali antico paululùm declivi.* Long. 1·20; lat. 1·65 poll.

Hab. Bay of Manila; sandy mud, six fathoms: Cuming.

Rather a solid shell, which is apparently closely allied to the *lintea* of Conrad; but the curvature of the ligamental margin, as represented in the figure of that shell, by no means agrees with its direction in *perplexa*.

"Descriptions of six new species of *Voluta*," by G. B. Sowerby, Esq.:—

VOLUTA MAMMILLA, Gray. *Vol. testâ ovato-oblongâ, tenui, lutescente, apice mammillari, obtusissimo, subspirali; anfractibus duobus, ultimo magno, ovali, maculis lineisque castaneis picto; aperturâ magnâ; columellâ plicis tribus.*

Digitized by Google

Shell ovate-oblong, thin, brownish-yellow, with a mammillary, subspiral, very obtuse apex; volutions two, the last of which is large, oval, marked with chestnut-coloured spots and zigzag lines; aperture large; columella with three folds.

From New Holland; a single specimen, which appears to be only a very young shell, is in the British Museum. This is a very remarkable species, forming the link that unites *Cymba* with *Melo*, the apex of this species being subspiral, while in *Cymba* the apex is amorphous.

VOLUTA PIPERITA. *Vol. testâ obovatâ, ventricosiusculâ, crassiusculâ, pallescente, quinquefasciatâ, fasciis posticâ mediânâ et anticâ brunneo-puncticulatis, strigisque fuscis irregularibus ornatis; fasciis duabus intermediis pallidioribus, strigis nonnullis lividis, cum strigis fuscis, fasciarum alternarum continuis; anfractibus quinque, tribus primis papillam efformantibus, papillâ lævi, posticè subgranosâ; ultimo maximo, ovali; aperturâ elongatâ, latiori, intus aurantiacâ; columellâ plicis 4, validis, labioque columellari aurantiacis.*

Shell obovate, rather ventricose and thickish; of a pale colour, with five bands, the posterior, middle and anterior of which are dotted with brown, and ornamented with irregular fuscous streaks; the two intermediate bands are paler, with livid streaks, which are continuous with the brown streaks of the alternating bands; volutions five, of which the first three form the papillary apex, which is smooth, and slightly granose posteriorly; the last volution very large, oval; aperture elongated, rather wide, orange-coloured within; columella with four distinct folds, orange-coloured as well as the columellar lip.

A single specimen only is known, which is in Mr. Norris's collection.

VOLUTA NORRISII. *Vol. testâ ovatâ, suboblongâ, ventricosâ, coronatâ, lævi, cinereo-fulvâ, maculis parvis niveis aliisque fuscis adspersâ, fasciis duabus transversis fuscis, interruptis, hîc illîc lineis interruptis, longitudinalibus notatis; spirâ brevi, apice papillari, granoso; anfractibus sex, ultimis duobus spinis brevibus acutis coronatis; aperturâ magnâ, oblongâ, intus fuscâ; columellâ quadriplicatâ, plicis duabus anticis validioribus.*

Shell ovate, rather oblong, ventricose, coronated, greyish brown, sprinkled with small snow-white and brown specks, with two transverse brown interrupted bands, here and there marked with interrupted longitudinal lines; spire short, with a papillary granose apex; volutions six, the last two crowned with short sharp spines; aperture large, oblong, brown within; columella with four folds, of which the two anterior are prominent.

Found on the reefs at low water, on Dupuch's Island, by J. C. Dring, Esq., R.N. In Mr. Cuming's collection. Wagner has figured this species for *V. nivosa*.

VOLUTA MEGASPIRA. *Vol. testâ fusiformi, turritâ, tenuiusculâ, lævi, rufescente-carneolatâ, strigis maculisque castaneis notatâ;*

Digitized by Google

spiræ anfractibus sex, subelongatis, medio ventricosiusculis, primis duobus apicem papillarem efformantibus, 3tio, 4to, 5to et 6to obtusè longitudinaliter costatis, ultimo magno, oblongo, anticè attenuato; aperturâ oblongâ, labio externo subreflexo; columellâ quinquepli-catâ, plicis posticis obtusis, parvis.

Shell fusiform, turrited, rather thin, smooth, of a reddish flesh-colour, marked with chestnut streaks and blotches; volutions of the spire six, rather elongated and ventricose in the middle, the first two forming the papillary apex, the 3rd, 4th, 5th and 6th with obtuse longitudinal ribs, the last large, oblong, attenuated anteriorly; aperture oblong, outer lip slightly reflected; columella with five folds, the posterior of which are small and obtuse.

I have only seen a single specimen, which is in Mr. Cuming's extraordinary collection; it is probably the same as Kiener's *V. lyriformis*, but it is not the same as Broderip's, which is identical with Swainson's *Mitra lyriformis*. Its papillary apex closely resembles that of *V. fulminata*.

Voluta Guildingii. *Vol. testâ oblongâ, crassâ, fulvescente, lineolis saturatioribus aliisque albis pictâ; spirâ acuminatâ, apice obtuso; anfractibus 5 ad 6, subventricosis, longitudinaliter costatis, interstitiis costarum transversim striatis, ultimo magno, lævigatiusculo; aperturâ mediocri, labio externo extus incrassato, albicante, intus dente parvo instructo; columellâ plicis quinque ad sex parvis, anticis duabus validioribus.*

Shell oblong, thick, fulvous, marked with little white lines and others of a darker colour; spire acuminated, with an obtuse apex; volutions five to six, rather ventricose, longitudinally ribbed, interstices of the ribs with transverse striæ, the last volution large, rather smooth; aperture middle-sized, outer lip externally thickened, whitish, furnished with a small tooth internally; columella with five or six small folds, of which the two anterior are more prominent.

This is the smallest known species of Volute; it was discovered at St. Vincent's by the late Rev. Lansdown Guilding. In Mr. Cuming's and Mr. Metcalfe's collections.

Voluta Cyllkniformis. *Vol. testâ parvâ, ovatâ, crassâ, læviusculâ, albicante, maculis parvis flavicantibus sparsim ornatâ; spirâ subconicâ, anfractibus sex, posticè coarctatis, ad suturam granosis, anticè longitudinaliter costatis, ultimo magno, anticè transversim striato; canali parvo, reflexo; aperturâ oblongâ, labio externo extus incrassato, margine interno intus dente parvo instructo; labio columellari anticè ruguloso, dentibus tribus parvulis munito.*

Shell small, ovate, thick, rather smooth, whitish, sprinkled with small yellowish specks; spire somewhat conical, with six volutions, which are contracted posteriorly, granose at the sutures and longitudinally ribbed anteriorly; the last volution is large and anteriorly transversely striated; canal small, slightly reflected; aperture oblong, outer lip externally thickened, its internal edge furnished with a small tooth; columellar lip rugulose anteriorly, furnished with three small teeth.

Digitized by Google

The only specimen I have seen of this curious little shell is in the collection of W. Metcalfe, Esq. In general appearance it nearly resembles a *Cyllene*.

September 24, 1844.

No business was transacted.

Digitized by Google

October 8, 1844.

Richard C. Griffith, Esq., in the Chair.

Extract of a letter from Dr. E. D. Dickson, Corr. Memb., dated Tripoli, 23rd of July, 1844:—

"I am at present engaged in collecting Bats for the Society, and will endeavour to prepare a skeleton or two of the *Cursorius Isabellinus* and *Otis Houbara*. I may also perhaps obtain the egg of these birds, since it has occasionally been met with by the natives.

"There are no lions, deer, or wild boars in this part of Barbary, nor have I ever heard of the wild hunting-dog. The only species of dog indigenous in Tripoli is the Arab shepherd dog, of which I could easily send you specimens, if desirable. Tunis is the proper place for wild boars, where they are so plentiful that I am told they constitute the chief sport of its European residents."

Various Skins of Mammalia from Chile were laid before the Meeting, and Mr. Waterhouse read some notes relating to them with which he had been favoured, in a letter from Mr. Thomas Bridges, Corr. Memb., who had formed the collection.

"The specimens," Mr. Waterhouse observed, "contained two species of foxes, both of which were quite distinct from the *Canis fulvipes* from Chiloe. The one approaches most nearly to the *Canis Magellanicus*, and might possibly be a variety of that animal, differing in having a more slender appearance; but this arises perhaps entirely from its fur being shorter, a difference which would probably arise from dissimilarity of climate, the *C. Magellanicus* being from a colder, and humid part of South America. The Chile animal, in having a more slender appearance, approaches considerably to the *Canis Azaræ*; from this however it may be distinguished by the absence of the black on the chin, in having the ears of a deeper and richer rust-colour, and there is the same difference observable in the colouring of the legs. The hind-legs want the black patch, which is situated considerably above the heel, and is very conspicuous in *C. Azaræ*. The tail is longer and of a brilliant rust-colour beneath; in *C. Azaræ* it is pale in the same part. This, according to Mr. Bridges, is the *Culpeo* of the natives, and is no doubt the animal so called by Molina.

"The second species of fox of the collection Mr. Waterhouse regards as the *Canis Azaræ*. It is smaller, Mr. Bridges observes, than the Culpeo, and less common and mischievous; more shy in its manners, and, according to his observations, confines itself more to the lower parts of the country, inhabiting the provinces of Valparaiso, Aconcagua, and Colchagua, where it is abundant. It is well known to the natives under the name of 'Chilla.'

Digitized by Google

"The following species of Rodents were also contained in the collection, viz. *Myopotamus coypus, Poephagomys ater, Octodon Cumingii, Mus Darwinii, Mus megalonyx* (a new species, the characters of which Mr. Waterhouse pointed out), and the Mountain Viscacha (*Lagotis Cuvieri*, Bennett). Several specimens of this last-mentioned animal were procured by Mr. Bridges on the Chile side of the Andes, and upon comparison they prove to be specifically identical with an individual formerly sent by the same gentleman and which was found in the vicinity of Mendoza. The Viscacha, Mr. Bridges' notes state, 'confines itself to the elevated parts of the Andes, always inhabiting rugged and precipitous mountains where there are natural caves or immense stones rolled in confusion, amongst which it makes its abode.' It has a very extended range, he having found it in Bolivia in south lat. 20° to 22°, whilst the specimens laid before the Meeting were from the province of Aconcagua, near 'Los ojos de Agua.' Mr. Bridges further remarks that it seldom leaves its abode during the daytime, but comes out to feed upon the herbage either before sunrise or late in the evening.

"Several specimens of *Didelphis elegans* were also sent home by Mr. Bridges, who states that they were procured for him by the natives in the province of Aconcagua, where they were caught in traps baited with meat, and which were placed for that purpose in the vicinity of old hedges and vineyards. Mr. Bridges also calls attention in his letter to the differences observed in the sexes of this animal, the female being considerably smaller than the male, and remarkable for having the tail very thick and fleshy. It is known to the natives by the names 'Comadrejo' and 'Llaca.'"

The following is Mr. Waterhouse's description of the new species of *Mus* (which he places in the section *Hesperomys*) contained in the collection:—

HESPEROMYS MEGALONYX. *Hesp. suprà cinerascenti-fuscus, subtùs cinereo-albus; auribus mediocribus; pedibus anticis unguibus magnis armatis; caudâ brevi, pilis minutis obsitâ.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin	4	4
——— *caudæ*	1	6
——— *auribus*	0	$3\frac{1}{2}$
——— *tarsi digitorumque*	0	$11\frac{1}{3}$
——— ab apice rostri ad basin auris	1	$2\frac{1}{2}$

Hab. Chile.

This little mouse evidently belongs to the genus *Hesperomys*, but it differs from any species hitherto described in having stronger fore-feet, and these furnished with long claws, exceeding the toes in length. The inner toe or thumb is furnished with a distinct pointed claw. The fur is very soft, and in the upper parts of the body nearly of a uniform grey-brown tint, though the hairs of the ordinary fur are annulated with pale brown; at the base these hairs are of a deep slate-grey colour. The under parts of the body are grey-white, but the hairs are deepish grey at the root, and on the chest there is a rownish mark. The chin is white; the feet are pale brown, but the

Digitized by Google

hairs on the toes are dirty white. The tail is clothed with short brown hairs. The ears, which are rather small, are well-clothed with moderately long hairs, and these are variegated with pale brown and dusky; they are much hidden by the long fur of the head.

From Mr. Bridges' notes I learn that this little animal was found near the margin of the Lake of Quintero.

Mr. Waterhouse also characterized a new species of *Octodon* contained in a former collection sent home by Mr. Bridges:—

Octodon Bridgesii. *Oct. corpore suprà flavescenti-fusco nigroque penicillato; subtùs flavescente; pedibus albis; auribus magnis posticè emarginatis; caudâ, quoad longitudinem, corpus ferè æquante, nigrâ, subtùs sordidè albâ, dimidio apicali pilis longis vestitâ.*

	unc.	lin.		unc.	lin.
Longitudo ab apice rostri ad caudæ basin ..	8	0	vel	8	6
——— *caudæ*	5	6	„	5	8
——— *tarsi digitorumque*	1	6½	„	1	6¾
——— *auris*	0	6½	„	0	6¾

Hab. Chile.

The general hue of this animal is brownish, a tint produced by the admixture of brownish ochre and black: the hairs of the fur are deep slate-grey next the skin, and on the back black externally, but most of them broadly annulated with deep ochre towards the point; the last-mentioned colour prevails on the sides of the body, where numerous long interspersed white hairs are observable, as well as on the rump. The under parts of the body are of a cream-yellow. The ears are rather large, deeply emarginated behind, and clothed internally with small pale hairs, excepting towards the margin, where they assume a dusky hue; externally the ears are furnished with minute dusky hairs, but at the base they are white. The head, in the region of the ear, is very pale; the throat, inner side of the legs and the tarsi are white; the tail is about equal to the body in length; the basal half is tolerably well clothed with short hairs, which are black on the upper surface and dirty white on the under; on the apical half the hairs are longer (averaging rather more than a quarter of an inch in length) and almost entirely black. The fur is long and moderately soft.

The *Octodon Bridgesii* differs from the *O. Cumingii* (or *O. Degus*, as it should be called) in being considerably larger, of a less bright colour, and in having the tail longer and less distinctly tufted at the apex; the feet moreover are white, or very nearly so.

The dimensions given are taken from two specimens, one in the British Museum collection and the other in that of the Zoological Society, which were brought to this country by Thomas Bridges, Esq., a very zealous collector and good observer, after whom I have named the species. The skulls of these two specimens agree with each other, and differ considerably from those of the *O. Cumingii*. In the first place they are about one-third larger, less arched above; the nasal bones are narrower in proportion, the frontal bones smaller

Digitized by Google

and more contracted in front, and the palate is also more contracted in front. The molar teeth of the upper jaw have the inner fold of enamel deeper. In the lower jaw the molar teeth have the lateral angles more produced, and their transverse diameter is consequently greater in proportion. The coronoid process is distinctly larger in proportion. Other differences of size and proportion will be perceived upon comparing the following dimensions:—

	O. Cumingii.		*O. Bridgesii.*	
	in.	lin.	in.	lin.
Total length of cranium	1	6⅜	1	9½
Greatest width	0	10½	1	0½
Length of nasal bones	0	7	0	8½
Length of frontal bones	0	6½	0	6⅜
Width of interorbital space	0	5	0	4½
Total length of zygomatic arch	0	8½	0	11
Length from front of superior incisors to the molar teeth	0	5½	0	6½
Length of the four molar teeth taken together	0	4½	0	5½
Width of incisor teeth of upper jaw	0	1⅜	0	1⅝
Width of palate between foremost molars	0	1½	0	1½
Width of palate between hinder molars	0	2	0	2⅜
Length of ramus of lower jaw	0	11½	1	1⅜
Height of ditto in a vertical line, dropped from the condyle	0	5⅜	0	7

Mr. Waterhouse observed, that the skull in the genera *Octodon* and *Schizodon* differs from that of the nearly allied genera of *Abrocoma* and *Poephagomys*, as well as the *Echymys* group, in having a small vertical plate of bone which rises from the upper surface of the anterior root of the zygomatic arch, and which serves to protect, externally, the infra-orbital nerve. The superior incisor tooth enters the superior maxillary bone, and passes beyond the intermaxillary suture by about one-sixth of the whole length of the tooth; whilst in *Abrocoma* the incisor is shorter, terminating at the suture mentioned, and thus approaches the genus *Lagotis*, as well as in several other characters which he had before noticed. *Poephagomys* is remarkable for having the superior incisor tooth extended backwards and outwards, covered by a thin fold of bone, and terminating on the outer surface of the palatal portion of the skull, close to the third molar tooth.

Notwithstanding the great superficial resemblance which exists between these animals and the *Muridæ*, it will be evident upon examination that they belong to a different section of the Rodent order, a section the species of which is readily distinguished, as he had elsewhere pointed out, by the structure of the skull and lower jaw; it is not, however, in these parts alone that differences exist between the *Octodontidæ* and the *Muridæ*, for there is a dissimilarity in the form of the muzzle, which he should take an early opportunity of showing by means of drawings and descriptions, made either from the living animals or from specimens preserved in spirit, and that

Digitized by Google

not only the *Octodontidæ*, but the whole of the great section *Hystricina*, established by himself chiefly upon characters furnished by the crania, possess peculiarities which will serve to distinguish them from other groups of Rodents. In this great section, moreover, we find the tibia and fibula invariably distinct, and not echylosed, as in the *Muridæ*, which should, I now think, embrace the *Myoxidæ*, but not the genus *Anomalurus*, which Prof. Waguer is inclined to place in the last-mentioned section, that genus having the tibia and fibula distinct, as in the Sciurine and Hystricine groups.

Mr. Fraser brought before the Meeting the following species of Chilian Birds, not included in the former collection. (See Proceedings of Zoological Society, 1843, p. 108.)

Milvago megalopterus, Meyen; *Synallaxis flavogularis*, Gould; *Sturnella militaris*, Vieill.; *Attagis Gayi*, Less.; *Aphriza Townsendii*, Aud.; *Calidris arenaria*, Ill.; *Cyanopterus fretensis*, Eyton; *Dafila pyrogaster*, Eyton; *Dafila urophasianus*, Eyton; *Phalacrocorax albigula*, Brandt.

To the last-mentioned bird the following note was attached:—"Guanayre of the natives. A very scarce bird; found along the shores of Chile in rocky places. T. B."

Mr. Fraser also described a new bird from Chile, for which he proposed the name of *Leptopus Mitchellii**.

LEPTOPUS.

Rostrum longum, tenue, rectum; nares basales; alæ mediocres; primariæ tres ferè æquales, secunda longissima; cauda subrotundata; tarsi mediocres; digiti longi et tenues; nullus digitus posterior; ptilosis junioris seniori dissimilis.

The bill of this bird is of the same formation as that of *Totanus chloropygius*, Vieill., while the feet resemble those of *Hiaticula tricollaris*.

LEPTOPUS MITCHELLII. *Lep. capite fuscescente lineâ albâ circa verticem; collo ferrugineo; corpore supernè cinereo-fusco purpureis metallicis coloribus ornato; fasciâ albâ apud pectus; subtùs fasciis parvis albis et nigris alternis; rostro saturatè viridi; tarsis flavis.*

Tot. long. 7; alæ, $4\frac{1}{2}$; cauda, $2\frac{1}{4}$; rostrum, 1; tarsi, $\frac{7}{8}$; digito medio, 1 poll.

Hab. Chile.

Another specimen, which I take to be the young of the above, has an undefined white line passing from eye to eye round the back of the head, the whole upper surface barred and mottled irregularly with ferruginous and blackish brown; cheeks and throat mottled with soot-colour, barred on the breast in a similar manner to the adult, which barring is almost lost on the belly; vent and thighs white.

* If the name *Leptopus* proves to have been previously used, I would propose *Leptodactylus* in its stead.

Digitized by Google

"Description of a new species of *Solarium*, from the collection of Mr. Cuming," by R. B. Hinds, Esq., R.N.

SOLARIUM FULIGINOSUM. *Sol. testâ orbiculato-conicâ, lævigatâ, fuligineo-fusco ornatâ; anfractibus inferioribus lævibus, subtumidis, superioribus longitrorsum plicatis, areâ mediânâ pallidâ, strigis latis obliquis fuscis pictâ; ad peripheriam carinatâ, suprà areâ angustâ planulatâ maculis fuscis quadratis articulatâ; ad basin paulisper tumidâ, pallidâ, lævigatâ; aperturâ quadratâ; umbilico patulo, crenis rectis fuscis armato.* Diam. 21; umbilic. 5½ lin.

Hab. ——?

The only specimen which is known to us is about the size of *S. formosum*, and is therefore materially smaller than the finer specimens of *S. perspectivum* or *S. trochleare*. The character of its ornation is however so very distinct from either of these, that it would mislead to push the comparison further. The species is perhaps rather thinner and lighter than usual, the inferior whorls and base are somewhat more tumid, and at the same time smooth; but the larger whorls are peculiarly decorated on their middle area with broad dark-brown flames, and are oblique as they proceed from the inferior portion upwards and forwards towards the left. The crenules are solid, straight, and of a dark-brown colour.

An extensive collection of Shells was exhibited which had been collected principally at Singapore and Borneo, and presented to the Society by James Brooke, Esq., Corr. Mem.

Digitized by Google

October 22, 1844.

Professor Owen, V.P., in the Chair.

A paper by Sylvanus Hanley, Esq., was read, containing descriptions of new species of *Cyrena*, *Venus*, and *Amphidesma*.

CYRENA RADIATA. *Cyr. testâ rotundato-cordatâ, crassâ, solidâ, inæquilaterali, tumidâ, subnitidâ, concentricè et subimbricatim sulcatâ; epidermide olivaceo-fuscescente, et marginem convexum aut subarcuatum versus, luteo-virescente radiisque nigrescentibus ornatâ; margine dorsali postico declivi, convexiusculo; lunulâ nullâ; natibus acutis, incurvatis, integris; ligamento parum prominente; superficie internâ purpureâ; dentibus lateralibus distinctis, brevibus, minutissimè rugulosis (haud crenatis autem), antico approximato.*

Long. 150; lat. 1·70 poll.

Hab. Central America. Mus. Hanley, Cuming, Sowerby.

This and the *variegata* of D'Orbigny are remarkable for being the only radiated *Cyrenæ* at present known to us. The latter species is decidedly depressed, whilst the *radiata* is peculiarly swollen.

CYRENA SORDIDA. *Cyr. testâ suborbiculari, crassâ, subinæquilaterali, ventricosâ aut tumidâ; epidermide olivaceo-fuscescente et marginem ventralem convexum versus, luteo-virescente, concentricè rugulosâ; margine dorsali postico, convexiusculo, declivi; natibus erosis, satis prominentibus; ligamento subinfosso; lunulâ nullâ; superficie internâ albidâ; dentibus lateralibus brevibus obtusis, antico magis approximato.*

Index Test. Sup. t. 14. f. 51. Long. 1·50; lat. 1·60 poll.

Hab. North America. Mus. Hanley.

The link between *Carolinensis* and *radiata*, uniting the interior and membranaceous wrinkles of the former to the general outline of the latter.

CYRENA PHILIPPINARUM. *Cyr. testâ maximâ, compressâ, obovatâ, valdè inæquilaterali, ponderosâ, anticè plicato-sulcatâ, epidermide olivaceo-fuscescente, indutâ; margine ventrali convexiusculo; ligamentali subdeclivi, et angulum obtusum cum margine postico formante; natibus integris, approximatis, incumbentibus; ligamento pergrandi, valdè prominente; superficie internâ posticè et infernè purpureâ, supernè albido-cærulescente; dentibus cardinalibus crassissimis; lateralibus supra crenatis aut denticulatis, antico valdè approximato.*

Index Test. Sup. t. 14. f. 60. Long. 4; lat. 4·75 poll.

Hab. Philippines. Mus. Cuming, Hanley.

There are a few narrow diverging folds on the posterior slope, but this character is by no means peculiar to the species, being equally

Digitized by Google

possessed by *Keraudreni*, *obesa* and *rotundata*. The ligament is dull yellowish, variegated with rich green. The young are of a uniform bright grass-green, and exhibit more decidedly than the adult the vestiges of an incipient lanceolate lunule.

CYRENA PLACENS. *Cyr. testâ suborbiculari, subventricosâ, inæquilaterali, nitidâ, concentricè sulcato-striatâ, epidermide virido-flavescente indutâ; margine ventrali convexo; dorsali, utrinque declivi et convexiusculo; natibus erosis; ligamento fulvo, depresso, angusto; lunulâ nullâ; superficie internâ purpureâ; dentibus lateralibus minutissimè rugulosis haud autem crenatis, antico brevi et subapproximato.*

Index Test. Sup. t. 14. f. 52. Long. 1·50; lat. 1·75 poll.

Hab. ——? Mus. Hanley.

A beautiful and rare species, of which I have never seen but my own specimen and that in the Jardin des Plantes at Paris. The sulci are close and regular, and the outline of the shell, although not very unlike that of *radiata*, is convex in front of the beaks, thus rendering the front extremity broad and somewhat obtuse.

VENUS SUBNODULOSA. *Ven. testâ ovatâ, crassiusculâ, subæquilaterali, satis convexâ, concentricè costatâ; costis confertis, anticè medioque obtusis, posticè in breves lamellas conversis, undique a sulcis radiantibus decussatis; margine ventrali convexo aut subarcuato; dorsali, utrinque subdeclivi; pube et lunulâ oblongo-cordatâ, prominentibus; ligamento infosso, angustissimo; margine interno undique crenulato; superficie internâ purpureo pictâ.*

Var. *α. Testâ albidâ, livido-brunneo variegatâ.*

Var. *β. Testâ fulvo-fuscescente, natibus albidis; sulcis subremotis.*

Index Test. Sup. t. 16. f. 19. Long. 0·58; lat. 0·75 poll.

Hab. San Nicholas, Philippines. Mus. Cuming, Hanley.

This species bears some resemblance in sculpture to *V. Marica*, but the shape is quite different. The concentric ribs are rendered subnodulous by the radiating grooves. Only a few specimens of this rare shell were procured by Mr. Cuming in the Philippine Islands.

VENUS CHEMNITZII. *Ven. testâ rhombeo-cordatâ, crassâ, ventricosâ, valdè inæquilaterali, albidâ, brunneo subradiatim maculatâ et strigatâ, radiatim costellatâ, concentricè lamelliferâ; lamellis numerosis, brevissimis, undique crispis; costellis angustis confertissimis; margine ventrali convexo intusque crenulato; dorsali postico subrecto et minimè declivi; latere postico supernè angulato; antico brevi, attenuato, rotundato; lunulâ fuscâ, cordatâ; ligamento angusto, infosso; superficie internâ albidâ, immaculatâ.*

Index Test. Sup. t. 16. f. 20. Long. 1·75; lat. 2·50 poll.

Hab. San. Nicholas, Philippines (Cuming). Mus. Cuming, Hanley.

This beautiful species bears a strong resemblance to the shell delineated in the sixth volume of the 'Conchylien Cabinet,' fig. 384, which is commonly quoted for the *reticulata* of Linnæus equally with the two preceding figures; although Chemnitz, without separating it from that species, specifies the absence of the orange tinge upon the

Digitized by Google

teeth, the peculiar characteristic of that well-known shell. There is a slight shade of orange beneath the umbones internally, and the teeth are similar to those of *puerpera*.

VENUS LACERATA. *Ven. testâ* V. puerperæ *affini, minus autem ventricosâ et margine ventrali posticoque magis arcuatis; margine ligamentali subrecto et minimè declivi; lamellis concentricis confertioribus, et posticè asperrimis; superficie externâ albidâ, lineis ferrugineis aut brunneis angulatim strigatâ; extremitate posticâ intus extusque immaculatâ.*

Index Test. Sup. t. 16. f. 23. Long. 2·50; lat. 2·50 poll.

Hab. Moluccas? Mus. Hanley.

The fringed lamellæ become so crowded at the hinder extremity of this rare and beautiful shell as to form a kind of raised reticulation. It is a much rounder species than the *V. Listeri*, to which it also bears a considerable resemblance.

VENUS SCABRA. *Ven. testâ ovato-cordatâ, inæquilaterali, subventricosâ, pallidè brunneâ, radiatim costellatâ; costellis confertis et concentricè squamiferis; margine ventrali valdè arcuato; dorsali utrinque convexiusculo et anticè brevi; natibus acutis et anticè incumbentibus; lunulâ subinconspicuâ; pube haud excavatâ; superficie internâ, lividâ et posticè saturatius tinctâ; margine interno crenato.*

Index Test. Sup. t. 16. f. 24. Long. 0·50; lat. 0·70 poll.

Hab. Catbalonga, Philippines. Mus. Cuming, Hanley.

A rare species, which is somewhat allied to *decorata* and *ovata*, but distinguishable from either by the greater convexity of its lower margin. The radiating ribs are peculiarly strong upon the umbones, from whence they separate into two or three smaller ones, which become more densely armed with the concentric rows of scales as they approach the lower margin.

VENUS ROBORATA. *Ven. testâ cordato-trigonâ, solidâ, validè inæquilaterali, magis minusve ventricosâ, albidâ (intus purpureo posticè infectâ), concentricè cingulatâ; cingulis multis, lævibus, obtusis; interstitiis lævibus; margine ventrali arcuato (intus leviter crenulato); dorsali postico convexo et valdè declivi; lunulâ profundâ, cordatâ; pube lævi, excavatâ; sulco radiante obtusissimo, lunulam alteram, ad extremitatem anticam simulante.*

Index Test. Sup. t. 16. f. 25. Long. 1; lat. 1 poll.

Hab. Van Diemen's Land. Mus. Hanley, Metcalfe.

Not at all unlike the *dysera* of Chemnitz, but the concentric ribs are in that species distant and membranaceous, whilst in ours they are thick, obtuse, and rather crowded.

VENUS LYRA. *Ven. testâ rotundato-cordatâ, ventricosâ, valdè inæquilaterali, albidâ, lineis maculisque brunneis angulatim variegatâ, concentricè costellatâ; costellis confertissimis lævibus, medio subimbricatis, anticè et posticè membranaceis; interstitiis glabris; margine ventrali arcuato, intusque crenato; lunulâ cordatâ, brunneâ, profundè impressâ; pube excavatâ; superficie internâ albidâ.*

Digitized by Google

Index Test. Sup. t. 16. f. 21. Long. 1·20; lat. 1·40 poll.
Hab. Gulf of Guinea (Rang). Mus. Hanley, Cuming.

In contour, colouring and general sculpture this rare shell approaches the *cincta* of Chemnitz (f. 387), but whilst that species is girt with but a few broad belts, ours is adorned with at least forty. It is sometimes called *V. cingulata* of Lamarck, but not only is the expression "annulis crenatis" utterly at variance with its characteristics, but an examination also of the typical specimens of the Jardin des Plantes has proved to me its complete distinctness from that species. Its teeth are those of the section *Dosina*.

VENUS DECIPIENS. *Ven. testâ parvâ, rotundato-subtrigonâ, compressâ, inæquilaterali, solidâ, pallidè fulvâ, radiis latis rufo-brunneis variegatâ, concentricè costatâ; costis glabris, subremotis, depressis, posticè sublamellosis, et supra pubem impressam porrectis; interstitiis subconcavis, lævibus; margine ventrali subarcuato, intusque subcrenato; dorsali, utrinque declivi, posticè convexo, anticè brevi, subrecto; lunulâ lanceolatâ; ligamento angustissimo, infosso.*

Index Test. Sup. t. 16. f. 22. Long. 0·75; lat. 0·90.
Hab. Australia? Mus. Hanley, Cuming.

So extremely like the young of *fasciata* as with difficulty to be distinguished. Its form, however, is proportionably broader between the lateral extremities, the valves are much more compressed, and the interstitial spaces decidedly broader. The hinder terminations of the lamellar ribs, which project beyond the escutcheon in compressed tubercles, do not appear to become obsolete by age, as in *fasciata*.

AMPHIDESMA CARNICOLOR. *Amph. testâ suborbiculari, convexâ aut subventricosâ, subtenui, subæquilaterali, albido-rosea aut carneâ, undique concentricè lamellatâ; lamellis multis, membranaceis, ad margines earum serratis; interstitiis rugis radiantibus minutis, confertissimè ornatâ; margine ventrali rotundato, intusque integro; dorsali, utrinque brevi, subrecto et subæqualiter declivi; pube impressâ; superficie internâ aurantiâ.*

Index Test. Sup. t. 12. f. 28. Long. 1; lat. 1 poll.
Hab. Philippines. Mus. Cuming, Hanley.

Exquisitely sculptured, but so minutely as to baffle the unassisted eye.

Digitized by Google

November 12, 1844.

Professor Owen, Vice-President, in the Chair.

Extract of a letter from the President, the Right Hon. the Earl of Derby, to the Secretary:—

"Knowsley, Oct. 17.—A circumstance has just occurred here which I cannot help flattering myself will tend to throw light upon a matter in the history of the *Macropodidæ* which has been often disputed. I allude to the manner in which the young animal after birth attains its lodgement in the mother's pouch.

"My superintendent tells me that one of our female Bettongias was seen to part with a young one. She was observed to place herself erect in one of the angles of the place where she was confined, backing as it were into the corner, and in this situation produced the young one, which after its birth she took up in her fore-paws and deposited in the pouch. This latter process the superintendent witnessed himself.

"She had received the male so lately as the 19th of September, and the parturition took place on the 16th of October. We will take particular notice when the young quits the pouch.

"Of course this is not a decisive proof that all of the tribe adopt the same process, yet I think we may fairly conclude from analogy that they do."

"Oct. 19.—It may be observed that the period of utero-gestation is a very short one, even under a month. Something peculiar in the manner of the animal placing herself in the corner was observed by the person who fed her, he stopped and watched her, and thus witnessed the birth, immediately after which she turned round to the young one, and getting it up in her fore-paws, applied them to the mouth of the pouch, opened it with them, and as soon as the little one was deposited she put her head in after it; when her nose reappeared it was rather stained with blood. In five minutes she was jumping about the place as if nothing had happened."

A specimen of *Chamæleon* from the Cape of Good Hope was exhibited by Mr. Fraser.

Mr. Weaver, of Birmingham, exhibited and presented to the Society specimens of the following insects:—*Hipparchia Melampus**, *Leucaria littoralis, Sperantia sylvaria, Cleodora* ——?

* Taken on the mountains of Perthshire, about 3000 feet above the level of the sea.

Digitized by Google

November 26, 1844.

William Horton Lloyd, Esq., in the Chair.

A specimen of the *Phalangista gliriformis* was exhibited by the Secretary.

A communication was read from Joseph James Forrester, Esq., of Oporto, which was accompanied by a donation of nine specimens of *Echini* from the Portuguese coast, and of the following insects:— *Saturnia Pyri, Brachyglossa Atropos, Deilephila Euphorbiæ, D. Elpenor*; and also a group of *Pollicipes Cornucopia*.

Conclusion of a paper by Sylvanus Hanley, on the new species in the genus *Tellina*:—

Tellina virgulata. *Tel. testâ* T. Donacinæ *simillimâ, sed paululum angustiore, striisque exilioribus ornatâ; extus intusque albidâ roseo pereleganter radiatâ; radiis latis, haud interruptis; margine dorsali albido.* Long. 0·30; lat. 0·70 poll.

Hab. —— ? (Cuming.)

Tellina Owenii. *Tel. testâ ovato-oblongâ, solidiusculâ, subimpolitâ, compressâ, æquilaterali, albidâ, concentricè et confertissimè striatâ; margine ventrali valdè arcuato; dorsali utrinque subdeclivi, anticè subrecto, posticè incurvato et lamellis subdentato; extremitate anticâ rotundatâ; latere postico acuminato, subrostrato; costâ umbonali conspicuâ; natibus acutis; ligamento infosso; disco interno, aurantio; dentibus lateralibus subæquidistantibus.* Long. 1·25; lat. 2 poll.

Hab. Africa. Mus. Zool. Soc., Brit. Mus.

A very rare and beautiful shell, whose contour is that of *squalida* and sculpture that of *Pharaonis*. I have named it in honour of its discoverer, Captain Owen.

Tellina semen. *Tel. testâ ovatâ aut ovali, crassâ, inæquilaterali, subventricosâ, nitidâ, albidâ (intus submargaritaceâ), anticè rotundatâ, posticè obtusâ, concentricè striatâ; striis anticè subimbricatis confertissimisque, posticè remotioribus et elevatis; margine ventrali convexo; dorsali utrinque magis minusve convexo, posticè declivi, anticè declivi aut subdeclivi; latere antico multo longiore; ligamento minimo, prominulo; flexurâ subobsoletâ; dentibus lateralibus conspicuis, postico magis approximato.* Long. 0·25; lat. 0·50 poll.

Hab. Corregidor; sandy mud, twelve fathoms. (Cuming.)

Almost a *Donax*, but possessing a slight flexuosity which is not to be met with in that genus.

Digitized by Google

TELLINA NOBILIS. *Tel. testâ ovali, solidiusculâ, convexâ, inæquilaterali, nitidissimâ, lævigatâ, intus extusque rosea; margine ventrali convexiusculo, medio plerumque subrecto; dorsali, anticè vix declivi et convexiusculo, posticè subdeclivi et subrecto aut convexiusculo; latere antico longiore, ad extremitatem obtusè rotundato; postico obtusè angulato; natibus obtusis; flexurâ costâque umbonali subobsoletis; ligamento prominulo; dentibus cardinalibus parvis, lateralibus nullis.* Long. 1; lat. 1·50 poll.

Hab. Orion, province of Bataan, isle of Luzon; fine black sand, at low water. Mus. Cuming, Hanley.

The extreme link between *Tellina* and *Psammobia*, and not readily confounded with any of its division, owing to the general absence of colour in those Tellens which are destitute of lateral teeth.

TELLINA PUELLA. *Tel. testâ obovatâ, inæquilaterali, tenui, ventricosâ, lævi, nitidiusculâ, extus intusque albido-roseâ; margine ventrali anticè arcuato, posticè sursum acclinante; dorsali, anticè convexo, paululumque declivi, posticè convexiusculo et valdè declivi; latere antico longiore, rotundato; postico brevi, angustato, angulato; costâ umbonali subobsoletâ; flexurâ ventrali, satis conspicuâ; natibus obtusis; ligamento prominulo; dentibus parvis; lateralibus remotis, subæquidistantibus.* Long. 0·5; lat. 0·6 poll.

Hab. Senegal. Cuming, Metcalfe.

Not very unlike a thin *Solidula*, but provided with lateral teeth.

TELLINA CHINENSIS. *Tel. testâ ovali, solidiusculâ, convexâ, subinæquilaterali, impolitâ, intus extusque candidâ, lævigatâ; margine ventrali subrecto; dorsali, anticè convexiusculo et paululum declivi, posticè subrecto satisque declivi; extremitate posticâ obtusâ; latere antico longiore, rotundato; ligamento — ?; costâ umbonali obsoletâ; dentibus lateralibus nullis.* Long. 0·62; lat. 1 poll.

Hab. China. Mus. Britannicum.

TELLINA ALA. *Tel. testâ ovatâ, solidiusculâ, subinæquivalvi, subæquilaterali, nitidâ, convexiusculâ, extus intusque albidâ (radio brevi pallidè aurantio in adultis ornatâ), concentricè substriatâ; margine ventrali magis minusve convexo; dorsali anticè convexo et subdeclivi, posticè declivi et prope nates subretuso; latere antico, rotundato, longiore; postico angulato, subrostrato; flexurâ costâque umbonali conspicuis; ligamento subinfosso; cardine, dentibus primariis parvis, et nonnunquam dente laterali antico rudimentali, instructo.*

Var. *Testâ ovato-trigonâ, solidâ, convexâ, lævi aut sublævigatâ, nequaquam subrostratâ; flexurâ costâque umbonali subinconspicuis.* Long. 1·20; lat. 1·75 poll. Var. long. 1·20; lat. 1·50 poll.

Hab. Ceylon? Mus. Metcalfe, Cuming, Hanley.

An extremely variable species, with somewhat the aspect of *Nymphalis*, but easily distinguished by its lesser convexity, and in general by the presence of a pale orange streak on either side of the umbones, or in the young by the slight rostrum and the possession of regular concentric striæ.

Digitized by Google

TELLINA IRUS. *Tel. testâ ovatâ aut obovatâ, crassâ (in adultis), subventricosâ, subæquilaterali, impolitâ, extus intusque albidâ, concentricè rugulosâ; rugis interruptis minimis, confertissimis, subelevatis; margine ventrali magis minusve arcuato; dorsali anticè convexo et subdeclivi, posticè convexiusculo, elongato et declivi; latere antico paululum breviore, rotundato; postico infernè angulato; lunulâ (in adultis) parvâ, profundâ; ligamento infosso; costâ umbonali subobsoletâ; dentibus satis magnis.* Long. 1·10; lat. 1·40 poll.

Hab. —— ? Mus. Cuming, Walton.

Evidently a perforating species, and allied to the *Petricola ochroleuca* of Lamarck, the true *Tellina fragilis* of Linnæus's own collection.

Digitized by Google

December 10, 1844.

William Yarrell, Esq., Vice-President, in the Chair.

A letter was read from Joseph James Forrester, Esq., of Oporto, announcing to the Society that he, in conjunction with his friends, the Viscount Santa Martha and Colonel Owen, was engaged in forming a collection of the Skins of Mammals and Birds, from the Oporto and Alto Douro districts. The Secretary observed that among those already obtained was a Genet, a fact of much importance to naturalists, as from the days of Buffon no information had been obtained of its existence in the Peninsula.

— Cadell, Esq., presented to the Society a young Three-toed Sloth, *Bradypus tridactylus*, preserved in spirits, and the skin of the mother, which had died on the voyage home, within a few days' sail of England.

Mr. Gould exhibited specimens of *Echini* from Western Australia, for the purpose of comparison with those sent from Oporto by Joseph James Forrester, Esq., and laid upon the table on the last evening of meeting.

Descriptions of new species of *Mitra* and *Cardium*, by Lovell Reeve, Esq.:—

CARDIUM.

CARDIUM INCARNATUM. *Card. testâ gibboso-globosâ, longitudinaliter costatâ, costis quatuor et viginti, rotundis, complanatis, margines versus media obsoletè brevispinosis, interstitiis angustis, subprofundis, transversim striatis; pallidè incarnatâ, radiis roseis transversis hic illic ornatâ.*

Conch. Icon., *Cardium*, pl. 1. f. 2.

Hab. Bay of Manila (found in sandy mud at the depth of six fathoms); Cuming.

A warm flesh-tinted shell, of which Mr. Cuming collected a few odd valves in the above-mentioned locality, and has lately received several perfect pairs.

CARDIUM MINDANENSE. *Card. testâ subobliquè cordiformi, longitudinaliter costatâ, costis novem et viginti, squamiferis, squamis numerosis, confertis, posticè fornicatis, costarum interstitiis subprofundis; albidâ, fusco hic illic nebulosâ; intus posticè vividè purpurascente.*

Conch. Icon., *Cardium*, pl. 4. f. 19.

Hab. Cagayan, island of Mindanao, Philippines (found among sand at low water); Cuming.

Digitized by Google

The vaulted structure of the scales in this species is about intermediate in its character between that of the scales of the *Cardia consors* and *isocardia*.

CARDIUM AUSTRALIENSE. *Card. testâ transversè ovatâ, Donaciformi, medio subcontractâ, posticè flexuoso-angulatâ, subrostratâ, anticè compresso-attenuatâ; dimidio postico radiatim sulcato, antico lævigato, nitente; albidâ, aredi posticâ strigis brevibus fuscis utrinque ornatâ.*

Conch. Icon., *Cardium*, pl. 5. f. 24.

Hab. Port Lincoln, South Australia; Harvey.

This shell may be chiefly distinguished from the *Cardium Donaciforme*, to which it is in many respects allied, by the contracted flexuous prolongation of the posterior portion, and by the peculiarity of one half of the shell being conspicuously grooved, whilst the other half is smooth and shining.

CARDIUM OVIPUTAMEN. *Card. testâ obliquè ovatâ, tenui, ventricosâ, radiatim tenuissimè striatâ; nivea, opacâ, strigis lineisve rosaceo-fuscescentibus exilibus undatis concentricè nebulosâ, epidermide pallidâ margines versus indutâ; marginibus intus subtiliter crenulatis.*

Conch. Icon., *Cardium*, pl. 7. f. 36.

Hab. ——?

The general appearance of this and the following species is very like that of the *Cardium serratum*; both however are of a less oblique form, and the *Cardium oviputamen* under consideration is more ventricose.

The concentrically waved pinkish brown marks above noticed, though faintly indicated, are nevertheless characteristic, as distinguished from those of a different pattern, in the following species.

CARDIUM VITELLINUM. *Card. testâ obliquè ovatâ, tenuiculâ, radiatim striatâ; lutescente-albâ, maculis parvis numerosis rosaceo-fuscescentibus umbones versus copiosè lentiginosâ, epidermide lutea indutâ; marginibus intus crenulatis.*

Conch. Icon., *Cardium*, pl. 7. f. 37.

Hab. ——?

This shell is of a less ventricose ovate structure than the preceding, and farther distinguished by its different tinge and style of colouring.

CARDIUM HYSTRIX. *Card. testâ subquadrato-cordatâ, posticè concavo-angulatâ, radiatim costatâ, costis ad duas et triginta, angustis, compressis, posticis squamulis brevibus, cæteris spinis squamæformibus erectis, umbones versus subinflexis, elegantissimè ornatis; costarum interstitiis striis elevatis transversim subtiliter cancellatis; albidâ, costarum interstitiis pallidè rosaceis, linea vividè coccineâ utrinque pictis; intus purpureo-rufescente.*

Conch. Icon., *Cardium*, pl. 8. f. 40.

Var. β. *Testâ extus omninò nivea.*

Hab. Island of Corrigidor, Philippines (found in coarse sand at the depth of about seven fathoms); Cuming.

Digitized by Google

The exquisite delicacy and beauty of this shell is remarkable; each rib is surmounted with a close-set row of slender scale-like spines, and the interstices are minutely cancellated; they are moreover tinged with pink, and down each side of the ribs is a bright scarlet line.

There is another very beautiful small specimen of the *Cardium hystrix* in the collection of Miss Saul; and Mr. Cuming is also in possession of two of the white variety.

CARDIUM RUBICUNDUM. *Card. testâ oblongo-ovatâ, vix obliquâ, radiatim costatâ, costis acutè convexis, septem et triginta, quarum anticâ squamoso-crenatâ, mediânâ utrinque obtuso-squamatâ, posticâ tuberculatâ; rubicundâ, umbones versus albicante rubido-fusco maculatâ; marginibus intus vividè rubris.*

Conch. Icon., *Cardium*, pl. 9. f. 44.

Hab. Zanzibar, east coast of Africa.

An extremely pretty species, remarkable for its vivid colouring and for the elaborate character of its sculpture.

CARDIUM ASSIMILE. *Card. testâ oblongo-ovatâ, obliquè radiatim costatâ, costis quinque et triginta, basi latis, approximatis, summitatem versus attenuatis, anticis crenatis, postremis tuberculatis, medianis lævibus, lateraliter subtilissimè impresso-serratis; pallidè purpureo-rufescente, umbones versus albicante, maculis sparsis variegatâ.*

Conch. Icon., *Cardium*, pl. 9. f. 45.

Hab. Zanzibar, east coast of Africa.

This species approximates very closely to the *Cardium subelongatum*, yet there are differences which cannot be overlooked; it has a greater number of ribs and the ribs are of another structure.

MITRA.

MITRA NORRISII. *Mitr. testâ elongato-ovatâ, crassâ, solidâ, spirâ subobtuso-acuminatâ; striis transversis et longitudinalibus, elevatis, confertis, undique subtilissimè reticulatâ aut clathratâ, transversis prominentioribus; eburneâ, epidermide corneâ, tenui, nigerrimâ; columellâ sexplicatâ.*

Conch. Icon., *Mitra*, pl. 1. f. 6.

Hab. —— ?

I have much pleasure in dedicating this fine species, so entirely distinct from any hitherto described, to Thomas Norris, Esq., a worthy and esteemed patron of the natural sciences, whose magnificent collection of Mitres has so greatly contributed to the completeness of my monograph in the work above referred to. It is impossible to convey an adequate idea of the finely reticulated sculpture of this unique shell by a lithographed figure, it being so fine that the interstices of the net-work resemble minute punctures.

MITRA DENNISONI. *Mitr. testâ fusiformi, spirâ attenuato-acuminatâ, anfractibus subconcentricè costatis, transversim sulcatis,*

Digitized by Google

sulcis angustis, costas super plus minusve obsoletis; rubido-aurantiâ, zonâ unicâ albidâ cingulatâ, cærulescente-olivaceo inter costas peculiariter tinctâ; columellâ quadriplicatâ.

Conch. Icon., *Mitra*, pl. 3. f. 14.

Hab. Puteao, province of Albay, island of Luzon, Philippines (found on mud-banks at low water); Cuming.

I dedicate this fine species with much pleasure, at the particular request of Mr. Cuming, to J. Dennison, Esq., a gentleman who has acquired considerable fame in the conchological world on account of the very choice and select character of his collection of shells.

MITRA FLOCCATA. *Mitr. testâ elongato-ovatâ, crassiusculâ, lævigatâ, punctorum seriebus undique cinctâ; lutescente-spadiceâ, albo longitudinaliter floccatâ; columellâ quadriplicatâ, labro prope basin crenato.*

Conch. Icon., *Mitra*, pl. 3. f. 16.

Hab. —— ?

The specimen here figured, from the collection of Mr. Cuming, is the only one of the species I am acquainted with.

MITRA SOLIDA. *Mitr. testâ ovato-elongatâ, crassâ, solidâ, spirâ subturritâ; anfractibus numerosis, convexis, lævigatis, transversim sulcatis, sulcis angustis, striis subtilissimis prope suturas decussatis; spadiceo-fulvâ, albo sparsim et irregulariter floccatâ; columellâ quinqueplicatâ.*

Conch. Icon., *Mitra*, pl. 3. f. 18.

Hab. —— ?

This interesting species may be recognized by its many convex, deep-sutured whorls; and the whorls, being longitudinally striated near the sutures, exhibit a slight cancellated appearance.

MITRA INQUINATA. *Mitr. testâ fusiformi-oblongâ, subangustâ, spirâ acuminatâ, transversim impresso-striatâ, striis puncturatis; eburneâ, rubido-fusco longitudinaliter inquinatâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 5. f. 29.

Hab. —— ?

Though a species of very simple character, it is quite distinct from any hitherto described.

MITRA GRACILIS. *Mitr. testâ elongatâ, spirâ valdè productâ, suturis subprofundis; anfractibus transversim subtilissimè costatis, costis angustis irregularibus, interstitiis liris obtusis minutissimis pulcherrimè decussatis; albidâ, fuscescente pallidè fasciatâ, costis fusco articulatis; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 5. f. 31.

Hab. Island of Ticao, Philippines (found in sandy mud at the depth of six fathoms); Cuming.

A most delicately sculptured shell, with somewhat the character of the *Mitra granatina* about it.

MITRA DECLIVIS. *Mitr. testâ elongato-turritâ, basi truncatâ, spirâ*

Digitized by Google

acuminatâ; anfractibus supernè angulato-declivibus, lævibus, transversim exilissimè impressis; cinereo-carneâ, epidermide nigerrimâ; columellâ quadriplicatâ.

Conch. Icon., *Mitra*, pl. 6. f. 44.

Hab. —— ?

This shell appears to be quite distinct from the *Mitra glabra*; there is no appearance of transverse brown lines, the whorls are angularly bent next the suture, and the spire is more sharply acuminated.

MITRA COCCINEA. *Mitr. testâ elongato-fusiformi, spirâ acuminatâ; anfractibus longitudinaliter obtuso-costatis, interstitiis transversim elevato-striatis, anfractûs ultimi costis subevanidis; vividè coccineâ aut lutescente, balteo unico albo cingulatâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 7. f. 49.

Hab. Islands of Masbate and Luzon, Philippines (found on the reefs at low water); Cuming.

This species may be easily recognized by its peculiarity of colouring,—bright scarlet, encircled by a simple white belt.

MITRA TUMIDA. *Mitr. testâ abbreviato-fusiformi, spirâ brevi, apice acuto; anfractibus tumidis, supernè plano-angulatis, longitudinaliter rudè costatis, costis ad angulum noduloso-tumidis; albidâ aut virescente, anfractibus ad angulum rufo tinctis, ultimo balteo nigro latiusculo cingulato; columellâ tri- aut quadriplicatâ; aperturæ fauce nigricante-fuscâ.*

Conch. Icon., *Mitra*, pl. 8. f. 51.

Hab. New Holland.

A few specimens of this peculiarly swollen shell were lately brought from New Holland in H.M.S. *Beagle*.

MITRA RUPICOLA. *Mitr. testâ abbreviato-fusiformi, in medio obesiusculâ, spirâ attenuatâ; anfractibus supernè angulatis, costis latiusculis obtusis longitudinalibus et transversis decussatis, ad decussationem nodosis; carneâ, epidermide fuscâ, corneâ, crassâ, ad apicem erosâ, indutâ; columellâ triplicatâ.*

Conch. Icon., *Mitra*, pl. 8. f. 53.

Hab. St. Elena, West Columbia (dredged from a rocky bottom at the depth of fourteen fathoms); Cuming.

A new and very distinct species, at present unique in the collection of Mr. Cuming.

MITRA BALTEOLATA. *Mitr. testâ fusiformi, spirâ acuminato-turritâ; anfractibus transversim elevato-striatis, longitudinaliter costatis, costis confertis, anfractûs ultimi subevanidis; balteolis nigris duobus in medio cingulatis, supra cinereo-albidâ, linea unicâ fuscâ circum-ornatâ, infra aurantiâ, interdum cinereo-viridescente tinctâ, apice fusco; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 8. f. 54.

Hab. Mollucca and Philippine Islands (found at the islands of Zebu and Burias, under stones at low water); Cuming.

Allied to the *Mitra plicata*.

Digitized by Google

MITRA CHALYBEIA. *Mitr. testâ elongato-ovatâ, basin versus sulcatâ; anfractibus convexis, lævigatis, juxta suturas rudè subtilissimè crenulatis; cinereo-cærulescente alboque longitudinaliter strigatâ, transversim indistinctè fasciatâ, lineis rubido-fuscis æquidistantibus undique cingulatâ; columellâ rufo-aurantiâ, quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 9. f. 59.

Hab. —— ?

A new and very characteristic species, at present unique in the collection of H. Cuming, Esq.

MITRA FULGURITA. *Mitr. testâ cylindraceo-elongatâ, subangustâ, transversim impresso-striatâ, striis puncturatis; pallidè spadiceo-fulvâ, strigis angustis albis longitudinalibus ornatâ; columellâ quinqueplicatâ, subumbilicatâ.*

Conch. Icon., *Mitra*, pl. 9. f. 61.

Hab. —— ?

An interesting new species, marked with white lightning-like longitudinal streaks.

MITRA LIGNARIA. *Mitr. testâ oblongo-ovatâ, crassiusculâ, spirâ acuminato-productâ; anfractibus supernè depressis, longitudinaliter subobliquè obtuso-costatis, transversim subtiliter liratis, liris binis; rubido-aurantiâ, epidermide fuscâ indutâ; columellâ quadriplicatâ; aperturâ breviusculâ.*

Conch. Icon., *Mitra*, pl. 9. f. 64.

Hab. St. Elena, West Columbia (dredged from rocky ground at the depth of about fourteen fathoms); Cuming.

This shell has somewhat the character of the *Mitra rupicola* found in the same locality; the spire is however longer, the aperture consequently shorter, and the sculpture is of a different character.

MITRA LACUNOSA. *Mitr. testâ oblongo-ovatâ, spirâ breviusculâ, transversim sulcatâ, sulcis confertis, regularibus, profundè puncturatis; longitudinaliter lacunosâ, lacunis subconcentricè undatis; albicante, aurantio-fuscescente prope apicem maculatâ, anfractu ultimo fasciâ latiusculâ aurantio-fuscescente cingulato; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 10. f. 65.

Hab. —— ?

This species is characterized, independently of its peculiar style of colouring, by numerous longitudinal waved grooves or gutters having the appearance of sea-breaks.

MITRA PELLIS-SERPENTIS. *Mitr. testâ oblongo-ovatâ, crassâ, solidâ, spirâ subacuminatâ, liris plano-granulatis transversis et longitudinalibus subtilissimè decussatâ; intus extusque lutescente; columellâ quadriplicatâ; labro supernè contracto, intus striato-crenulato.*

Conch. Icon., *Mitra*, pl. 10. f. 66.

Hab. Islands of Mindoro and Bohol, Philippines (found under stones at low water); Cuming.

Digitized by Google

The granular coriaceous sculpture of this shell varies considerably in different individuals.

MITRA CUMINGII. *Mitr. testâ ovatâ, utrinque attenuatâ, spirâ acuminato-turritâ; anfractibus supernè angulatis, longitudinaliter costatis, costis numerosis, ad angulum mucronatis, liris transversis angustis cancellatis, interstitiis impressis; aurantio alboque peculiariter maculato-variegatâ, maculis aurantiis nigro-lineatis; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 10. f. 67.

Hab. Matnog, province of Albay, island of Luzon (found on the reefs); Cuming.

I dedicate this species to H. Cuming, Esq., as being one of the most beautiful and characteristic of the many interesting new Mitres collected by that indefatigable naturalist during his researches amongst the Philippine Islands.

MITRA RUBIGINOSA. *Mitr. testâ elongato-ovatâ, subfusiformi, transversim crebrisulcatâ, sulcis puncturatis; albâ, rubiginoso-tinctâ; columellâ quinqueplicatâ, plicis infimis subobscuris.*

Conch. Icon., *Mitra*, pl. 10. f. 68.

Hab. Island of Ticao, Philippines (found on the reefs at low water); Cuming.

The iron-mould spots on this shell exhibit rather a tessellated style of arrangement.

MITRA INTERLIRATA. *Mitr. testâ subelongatâ, spirâ acutâ, transversim liratâ, liris numerosis, acutiusculis, lirâ minore intercurrente, interstitiis striis longitudinalibus elevatis cancellatis; albâ, maculis perpaucis distantibus aurantio-fuscescentibus tinctâ; columellâ subumbilicatâ, quinqueplicatâ, plicis infimis subobscuris; basi leviter ascendente; aperturâ longiusculâ.*

Conch. Icon., *Mitra*, pl. 10. f. 70.

Hab. Island of Masbate, Philippines (found in sandy mud at the depth of four fathoms); Cuming.

The narrow intermediate ridge forms a prominent feature in this species.

MITRA ZEBUENSIS. *Mitr. testâ subfusiformi, nitidâ, basin versus sulcatâ, liris planiusculis, confertis, subtilissimè cancellatâ, liris longitudinalibus fortioribus; albidâ, anfractuum parte superiori maculis grandibus perpaucis castaneo-fuscis ornatâ; columellâ quinqueplicatâ.*

Conch. Icon., *Mitra*, pl. 10. f. 73.

Hab. Island of Zebu, Philippines (found on the reefs at low water); Cuming.

The brown spots being situated around the upper part of the whorls give an irregular tessellated character to the spire.

MITRA INFECTA. *Mitr. testâ ovatâ, basi recurvâ, spirâ acuminatâ; anfractibus striis impressis cinctis, ultimo tumidiusculo; pallidè flavâ, maculis castaneo-fuscis pictâ; columellâ obsoletè sexplicatâ.*

Digitized by Google

Conch. Icon., *Mitra*, pl. 11. f. 75.

Hab. Island of Annaa, Pacific Ocean (found on the reefs at low water); Cuming.

A solid, rather ventricose shell, with a peculiar twist at the base.

MITRA ACUPICTA. *Mitr. testâ acuminato-turritâ, anfractibus convexis, numerosis, longitudinaliter crebriliratis, transversim impresso-striatis; albidâ, apice basique rosaceis, liris punctis cæruleis et fuscis profusè variegatis; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 11. f. 76.

Hab. Zanzibar, east coast of Africa.

The surface of this beautiful shell has the appearance of being curiously embroidered with small coloured beads.

MITRA OBESA. *Mitr. testâ abbreviato-ovatâ, solidâ, supernè valdè obesâ, spirâ brevissimâ, sulcis spiralibus et radiantibus decussatim impressâ; anfractu ultimo basin versus sulcato, supra lævigato; albâ, lineis rubido-fuscis remotiusculis cingulatâ, epidermide vividè viridescente omninò indutâ; columellâ sexplicatâ.*

Conch. Icon., *Mitra*, pl. 12. f. 87.

Hab. —— ?

I have no information concerning the locality of this extremely interesting species, of which there is an example in the collection of Thomas Norris, Esq.

MITRA USTULATA. *Mitr. testâ elongatâ, spirâ angusto-acuminatâ, transversim subtilissimè striatâ; albidâ, lineis capillaribus fuscescentibus remotiusculis cingulatâ, maculis grandibus ustulato-fuscis nebulosâ; columellâ sexplicatâ.*

Conch. Icon., *Mitra*, pl. 13. f. 89.

Hab. —— ?

This species is at present unique in the collection of Thomas Norris, Esq.

MITRA CREBRILIRATA. *Mitr. testâ acuminato-turritâ, longitudinaliter subobliquè liratâ, liris angustis, crebris, interstitiis impresso-cancellatis; olivaceâ vel olivaceo-fuscâ, lineâ unicâ pallidâ infra suturas plerumque cinctâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 13. f. 92.

Mitra rosea, Kiener (not of Duclos).

Hab. Ceylon.

Figured by M. Kiener for the *Mitra rosea* of Duclos, which is the *Voluta ignea*, Wood, *Mitra subulata*, Lamarck.

MITRA POLITA. *Mitr. testâ acuminato-turritâ, lævigatâ, politâ, ad basin sulcatâ, prope apicem subtilissimè plicato-costatâ; fuscâ vel cinereo-fuscâ, lineâ unicâ pallidè flavicante cingulatâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 13. f. 94.

Hab. Islands of Zebu and Luzon, Philippines (found in mud on the shore at low water, and at the depth of six or seven fathoms); Cuming.

Digitized by Google

At the desire of one or two gentlemen whose opinions in conchological matters cannot be lightly esteemed, I have described the *Mitræ polita* and *crebrilirata* as new and distinct species; it must be admitted, however, that I have felt strongly inclined to regard the former as the Eastern analogue of the *Mitra ebenus, smooth variety*, of the Mediterranean, and the latter as the analogue of the *Mitra ebenus, ribbed variety*, of the same region.

MITRA VARIABILIS. *Mitr. testâ oblongo-ovatâ, medio subobesâ, lævigatâ, transversim subtilissimè punctato-striatâ; lutescente-olivaceâ, lineis fuscis capillaribus remotiusculis cinctâ, anfractu ultimo zonâ unicâ cærulescente-albâ medio ornato; columellâ quadriplicatâ; aperturæ fauce olivaceo-fuscâ.*

Conch. Icon., *Mitra*, pl. 13. f. 95.

Hab. Torres Strait (found under stones at low water); Dring.

The variable character of this species consists in its being sometimes flaked or indistinctly streaked with bluish white.

MITRA CYLINDRACEA. *Mitr. testâ cylindraceo-ovatâ, utrinque attenuatâ, sulcis capillaribus puncturatis, supernè remotiusculis, cingulatâ; lutescente-olivaceâ, maculis albis irregularibus infra suturas ornatâ, anfractu ultimo in medio maculato-fasciato; columellâ quadriplicatâ; aperturæ fauce fuscescente.*

Conch. Icon., *Mitra*, pl. 13. f. 97.

Hab. —— ?

The painting of this shell is not much unlike that of the *Mitra variabilis*.

MITRA PULLATA. *Mitr. testâ fusiformi, spirâ acuminato-turritâ; anfractibus supernè subangulatis, transversim impresso-striatis, longitudinaliter plicato-costatis, costis supernè obtuso-mucronatis; aurantio-lutescente, lineâ subtilissimâ fuscâ cingulatâ, anfractu ultimo fasciâ latâ nigricante-fuscâ ornatâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 14. f. 102.

Hab. Island of Ticao, Philippines (found on the reefs); Cuming.

The *Mitra pullata* is exactly intermediate between the *Mitræ balteolata* and *plicata*, differing sufficiently from both to constitute a distinct species.

MITRA OLEACEA. *Mitr. testâ oblongo-ovatâ, Buccinîformi, spirâ brevi; anfractibus convexis, lævigatis, epidermide corneâ olivaceo-fuscâ nitidâ indutâ; columellâ quadriplicatâ, basi truncatâ; labro in medio leviter contracto.*

Conch. Icon., *Mitra*, pl. 14. f. 105.

Hab. —— ?

There is a peculiarity in the form of this species which distinguishes it from any other of the Melania-like group.

MITRA OBELISCUS. *Mitr. testâ acuminato-turritâ, spirâ acutâ; anfractibus longitudinaliter costatis, costis angustis, crebris, interstitiis impresso-cancellatis; lutescente-fuscâ, lineâ unicâ albâ cingulatâ; columellâ quadriplicatâ, basi contorto-recurvâ.*

Digitized by Google

Conch. Icon., *Mitra*, pl. 15. f. 107.

Hab. Bais, island of Negros, Philippines (found among coarse sand and stones at the depth of seven fathoms); Cuming.

The whorls are numerous in this species and rather contiguous.

MITRA FUNEREA. *Mitr. testâ abbreviato-fusiformi, spirâ acutâ; anfractibus rotundis, liris transversis et longitudinalibus creberrimè decussatis, anfractu ultimo lævigato, ad basin sulcato; fuscâ, balteo unico angusto flavicante cingulato; columellâ triplicatâ, basi recurvâ.*

Conch. Icon., *Mitra*, pl. 15. f. 108.

Hab. Pasacao, South Camarinos, island of Luzon, Philippines (found in sandy mud at the depth of six fathoms); Cuming.

The whorls of the spire have a peculiar rounded decussated appearance, with the yellow belt just falling in the sutural depression.

MITRA VARIEGATA. *Mitr. testâ suboblongo-ovatâ, transversim regulariter sulcatâ, anfractuum limbo superiori subobsoletè crenulato; albidâ, olivaceo-spadiceo nebulatâ et variegatâ; columellâ quinqueplicatâ.*

Conch. Icon., *Mitra*, pl. 15. f. 111.

Hab. Islands of Ticao and Mindanao, Philippines (found on the reefs at low water); Cuming.

The whorls of this shell are very slightly angulated, and the clouded variegated painting only appears below the angle.

MITRA CÆRULEA. *Mitr. testâ subfusiformi-oblongâ, transversim regulariter sulcatâ, sulcis angustis, puncturatis; cærulescente-albicante, anfractu ultimo, fasciâ latissimâ cæruleâ, marginibus albimaculatis, cincto; basi et aperturæ fauce aurantio-fuscescentibus; columellâ quinqueplicatâ, umbilicatâ.*

Conch. Icon., *Mitra*, pl. 15. f. 113.

Hab. Islands of Ticao and Capul, Philippines (found on the reefs at low water); Cuming.

The white flake-like spots which appear on the upper edge of the blue band of the last whorl are just visible on the whorls of the spire above the sutures.

MITRA FULGETRUM. *Mitr. testâ subfusiformi, solidiusculâ; anfractibus supernè leviter angulatis, transversim impresso-sulcatis, sulcis angustis, subtilissimè puncturatis; rubido-castaneâ, strigis albis prominentibus undatis longitudinaliter ornatâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 15. f. 115.

Hab. Island of Burias, Philippines (found under stones at low water); Cuming.

The white longitudinal waved streaks are very strikingly depicted.

MITRA PRETIOSA. *Mitr. testâ fusiformi, spirâ acuminato-turritâ, transversim subtiliter costatâ, longitudinaliter confertim impresso-sulcatâ; suturis subprofundis; albidâ, rubido-fusco balteatâ et punctatâ.*

Digitized by Google

Conch. Icon., *Mitra*, pl. 15. f. 116.

Hab. ——?

In painting this shell reminds one of the *Mitra crenifera*; the sculpture is however of a quite different pattern.

MITRA GRUNERI. *Mitr. testâ abbreviato-fusiformi, subharpæformi, spirâ brevi, turritâ, acutâ; longitudinaliter acutè costatâ, costis supernè mucronato-tuberculatis, anfractuum parte superiori plano-angulatâ; olivaceo-viridescente, lineis tribus rubido-fuscis subdistantibus inter costas seriatim pictâ; columellâ quinqueplicatâ.*

Conch. Icon., *Mitra*, pl. 16. f. 119.

Hab. Island of Masbate, Philippines (found on the reefs at low water); Cuming.

It is somewhat a matter of surprise that this very characteristic species, which is not uncommon, has never been described. I dedicate it with much pleasure to E. L. G. Gruner, Esq., of Bremen.

MITRA CALIGINOSA. *Mitr. testâ ovato-fusiformi, solidiusculâ, spirâ breviusculâ; anfractibus convexis, lævigatis, transversim impresso-striatis; albâ, epidermide corneâ nigricante undique indutâ; columellâ quinqueplicatâ.*

Conch. Icon., *Mitra*, pl. 16. f. 121.

Hab. ——?

I have no locality for this species, which is a rather solid white shell, closely enveloped by a dark blackish epidermis.

MITRA FUNICULATA. *Mitr. testâ abbreviato-fusiformi, spirâ breviusculâ; anfractibus supernè subangulatis, liris angustis elevatis subdistantibus undique funiculatis, interstitiis striis subtilissimè cancellatis; roseo-albicante, epidermide fuscescente indutâ, liris fuscescente-punctatis; columellâ quadriplicatâ, plicis infimis subobscuris; aperturâ longiusculâ.*

Conch. Icon., *Mitra*, pl. 16. f. 122.

Hab. Isle of Plata, West Columbia (found in coral sand at the depth of fourteen fathoms); Cuming.

A species intermediate between the *Mitræ circulata* and *sulcata*.

MITRA CONCENTRICA. *Mitr. testâ acuminato-ovatâ, subfusiformi, longitudinaliter concentricè costatâ, costis supernè mucronatis, interstitiis impresso-striatis; albidâ, ferrugineo-fusco hinc et hinc maculato-tinctâ, ad basinque fasciatâ; columellâ quinqueplicatâ; aperturæ fauce striatâ.*

Conch. Icon., *Mitra*, pl. 17. f. 128.

Hab. Isle of Annaa, Pacific Ocean (found on the reefs at low water); Cuming.

This species is very closely allied to the *Mitra mucronata*, from which it only differs in the concentric disposition of the ribs, and in their being denuded of tubercles.

MITRA SENEGALENSIS. *Mitr. testâ fusiformi, spirâ acutè acuminatâ; anfractibus lævigatis, supernè tumidiusculis; livido-olivaceâ,*

Digitized by Google

flammulis perpaucis albidis longitudinaliter ornatâ; columellâ triplicatâ; aperturæ fauce livido-castaneâ.

Conch. Icon., *Mitra*, pl. 17. f. 129.

Hab. Senegal; Petit.

A very characteristic species, quite distinct from any hitherto described.

MITRA IMPRESSA. *Mitr. testâ elongatâ, sub-Terebræformi, longitudinaliter subtiliter costellatâ, costellis lævigatis, interstitiis transversim peculiariter impresso-sulcatis; fuscescente-rubidâ, maculârum serie unicâ subindistinctâ cingulatâ, costellis albidis; columellâ quinqueplicatâ, basi leviter recurvâ.*

Conch. Icon., *Mitra*, pl. 17. f. 130.

Hab. ——?

A truly interesting species, of which this is the only specimen I have seen. It is of a deep brick-red colour, covered with close whitish longitudinal ribs, each whorl being encircled round the middle with an indistinct row of spots of a darker red.

MITRA SOLIDULA. *Mitr. testâ oblongo-ovatâ, crassâ, solidâ, spirâ brevi, obtusâ, prope apicem subtilissimè concentricè sulcatâ; anfractibus convexis, lævigatis, transversim exiliter striatis; olivaceo-fuscâ, plicis albis; columellâ concavo-expansâ, callositate albicante supernè armatâ, quadriplicatâ; labro peculiariter planulato, supernè canaliculato, intus crenulato.*

Conch. Icon., *Mitra*, pl. 18. f. 133.

Hab. Island of Corrigidor, bay of Manila (found under stones at low water); Cuming.

This is a species of an interesting group of shells, of which the *Mitra Ziervogeliana* forms the type, distinguished by their solid structure, the prominent development of the columellar plaits, the presence of a callosity, and the peculiar flattened surface of the outer lip.

MITRA LIVIDA. *Mitr. testâ subquadrato-ovatâ, spirâ breviusculâ, acutâ; anfractibus lævigatis, longitudinaliter costatis, costis tumidis, infernè evanidis; livido-olivaceâ, balteo unico angusto cingulatâ, costis olivaceo-lutescentibus; columellâ quadriplicatâ; labro leviter sinuato; aperturæ fauce pallidè lividâ, striatâ.*

Conch. Icon., *Mitra*, pl. 18. f. 134.

Hab. ——?

I am much indebted to M. Deshayes for the loan of this very interesting species, of which I know no other specimens.

MITRA CHOAVA. *Mitr. testâ ovatâ, solidâ, glabrâ, spirâ brevi; nigricante-fuscâ, plicis albis; columellâ concavâ, callositate armatâ, quadriplicatâ; labro peculiariter planulato, supernè canaliculato, intus crenulato.*

Conch. Icon., *Mitra*, pl. 18. f. 135.

Hab. Isle of Johanna, Mozambique Channel; Hennah.

The characters of the *Mitra choava* are very similar to those of the

Digitized by Google

Mitræ solidula and *anthracina*; each species may, however, be fully distinguished by its difference of form and other minor peculiarities.

MITRA ANTHRACINA. *Mitr. testâ acuminato-ovatâ, spirâ acutâ, glaberrimâ; anthracinâ; columellâ subconcavâ, quadriplicatâ, callositate parvâ, supernè armatâ; labro peculiariter planulato, supernè leviter canaliculato, intus crenulato.*

Conch. Icon., *Mitra*, pl. 18. f. 137.

Hab. Island of Ticao, Philippines (found on the reefs at low water); Cuming.

Very closely allied to the *Mitra solidula*, but of a more elongated form, with a smooth shining surface.

MITRA ROBUSTA. *Mitr. testâ ovatâ, crassâ, spirâ brevi, subobtusâ; anfractibus tumidiusculis, transversim sulcatis, basin versus præcipuè, longitudinaliter concentricè plicato-rugosis; rubido-fuscâ; columellâ concavâ, quadriplicatâ, callositate armatâ; labro incrassato, planulato, supernè canaliculato, intus crenulato.*

Conch. Icon., *Mitra*, pl. 18. f. 140.

Hab. —— ?

This species partakes of the characters of the *Mitræ Woldemarii* and *Ziervogeliana* in about equal proportions.

MITRA PULCHELLA. *Mitr. testâ acuminato-ovatâ, spirâ subturritâ, longitudinaliter costellatâ, costellis angustis, planis, confertiusculis, basin versus subgranosis, transversim impresso-striatis; aurantio-lutescente, fasciâ purpurascente inter costas ornatâ; columellâ quinqueplicatâ.*

Conch. Icon., *Mitra*, pl. 19. f. 142.

Hab. Island of Barbadoes, West Indies; Humphreys.

The painting of this shell has a very pretty appearance.

MITRA HISTRIO. *Mitr. testâ subovatâ, spirâ breviusculâ, longitudinaliter costatâ, costis subobtusis, basin versus granulosis, interstitiis transversim striatis; vividè coccineâ, suturis nigris, nigro interdum nebulosâ, balteo albo angusto, balteoque nigro, cingulatâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 19. f. 144.

Hab. —— ?

A gaily-coloured scarlet shell more or less banded and bedaubed with black.

MITRA RUBRITINCTA. *Mitr. testâ oblongo-ovatâ, crassiusculâ, acutè acuminatâ, transversim undique sulcatâ; albâ, maculis grandibus aurantio-rubris supra infraque seriatim nebuloso-tinctâ; columellâ quadriplicatâ; labro crenulato.*

Conch. Icon., *Mitra*, pl. 19. f. 147.

Hab. Island of Ticao, Philippines (found under stones at low water); Cuming.

The surface of this shell is characteristically grooved throughout.

Digitized by Google

MITRA SPECIOSA. *Mitr. testâ obeso-ovatâ, utrinque attenuatâ, transversim impresso-striatâ, longitudinaliter costellatâ, costellis planiusculis, basin versus granulosis; rosaceo-albicante, costis fasciâ latissimâ fuscâ aut purpurascente-fuscâ tinctis, apice rosaceo; columellâ quadriplicatâ, plicâ superâ valdè maximâ.*

Conch. Icon., *Mitra*, pl. 19. f. 148.

Hab. Island of Capul, Philippines (found on the reefs); Cuming.

This shell, at a glance, has very much the appearance of the *Mitra pulchella*, but upon examination it will be observed that the dark band which encircles the one is painted on the ribs, whilst in the other it appears in the interstices.

MITRA CAVEA. *Mitr. testâ ovatâ, glabrâ, longitudinaliter costellatâ, costellis obtusis; cinereo-nigricante, costis macularum albicantium serie unicâ ornatis; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 19. f. 149.

Hab. ——?

The specimen here described, from the collection of Thomas Norris, Esq., is the only example of the species I have seen.

MITRA TELESCOPIUM. *Mitr. testâ ovato-fusiformi, lævigatâ, nitidâ, transversim punctato-striatâ; anfractibus contiguis, ultimo basin versus subcontracto, suturis conspicuis, profundis; cærulescente-albâ, anfractu ultimo infernè rufo-castaneo, spiræ apice nigricante; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 20. f. 80.

Hab. Island of Ticao, Philippines (found on the reefs at low water); Cuming.

This new and very characteristic shell exhibits the same peculiarly contracted structure as the *Mitra abbatis*, and the whorls have the same contiguous telescope-like appearance.

MITRA IGNOBILIS. *Mitr. testâ subobeso-fusiformi, basi leviter recurvâ, spirâ acuminatâ, transversim undique sulcatâ, sulcis confertis, subsuperficiariis; albicante, maculis grandibus ustulato-fuscis seriatim nebulosâ; columellâ sexplicatâ, plicis infimis, subobscuris.*

Conch. Icon., *Mitra*, pl. 20. f. 152.

Hab. Island of Ticao, Philippines (found on the reefs at low water); Cuming.

In order not to confound this species with one of very similar appearance, the *Mitra ustulata*, it is important to notice that the surface of the former is grooved throughout, whilst that of the latter is very finely striated and marked with rather distant brown hair lines.

MITRA DECURTATA. *Mitr. testâ abbreviato-ovatâ, subventricosâ, crassâ, solidâ, spirâ brevi, apicem versus acutâ; lævigatâ, infernè sulcatâ; nigerrimo-fuscâ, punctis albidis perpaucis prope basin, linedque albâ conspicuâ infra suturas cinctâ; columellâ quadriplicatâ; aperturâ amplâ; labro supernè sinuato et contracto.*

Conch. Icon., *Mitra*, pl. 20. f. 154.

Hab. ——?

Digitized by Google

A fine new species, of which I have seen several examples in an excellent state of preservation.

MITRA BADIA. *Mitr. testâ acuminato-ovatâ, transversim subtilissimè striatâ; undique badiâ; columellâ quadriplicatâ, plicâ infimâ subobscurâ; aperturâ breviusculâ.*

Conch. Icon., *Mitra*, pl. 20. f. 157.

Hab. ——?

This is rather an unsatisfactory species, though certainly not referable to any hitherto described.

MITRA CADAVEROSA. *Mitr. testâ ovato-turritâ, spirâ acutâ; anfractibus transversim impresso-striatis, supra et infra plus minusve angulatis, longitudinaliter costatis, costis ad angulos exasperato-mucronatis; albâ, balteo angusto fuscescente inter costas cingulatâ; columellâ quadriplicatâ; aperturæ fauce striatâ.*

Conch. Icon., *Mitra*, pl. 21. f. 160.

Hab. Philippine and Lord Hood's Islands (found under stones at low water); Cuming.

However closely this shell may approximate to the *Mitra exasperata*, it is uniformly white, and always exhibits a strong peculiarity in the band which appears in the interstices and not upon the summit of the ribs.

MITRA CARNICOLOR. *Mitr. testâ subabbreviato-fusiformi, liris parvis subobtusis, alternis majoribus, undique cingulatâ, liris striis impressis longitudinaliter incisis; extus pallidè carneolo-fuscescente, intus rosaceâ; columellâ quinqueplicatâ, plicâ infimâ subobscurâ.*

Conch. Icon., *Mitra*, pl. 21. f. 164.

Hab. ——?

A neatly sculptured delicately tinted shell, quite distinct from any hitherto-described species.

MITRA HINDSII. *Mitr. testâ lanceolato-fusiformi, spirâ acutissimè turritâ; anfractibus supernè angulatis, infra angulum leviter contractis, transversim carinato-costatis, costâ super angulum prominentiore, interstitiis concavis, subtilissimè elevato-striatis; lutescente, costis spadiceis, epidermide tenui indutâ; columellâ quadriplicatâ, plicis duabus inferioribus ferè obsoletis; aperturæ fauce subrosaceâ.*

Conch. Icon., *Mitra*, pl. 21. f. 165.

Hab. Gulf of Nicoya (found in mud at the depth of about seventeen fathoms); Hinds.

This beautiful species, which I have the pleasure of dedicating to a most zealous labourer in the field of conchological research, may be recognised by its graceful form and by the keel-like elevation of the ribs.

MITRA LATRUNCULARIA. *Mitr. testâ abbreviato-fusiformi, tenuiculâ, basi truncatâ; transversim undique sulcatâ, sulcis angustis, crebris, punctatis; albidâ, rubido-castaneo tessellatâ et fasciatâ; columellâ quadriplicatâ.*

Digitized by Google

Conch. Icon., *Mitra*, pl. 21. f. 166.
Hab. —— ?
A slight thin shell closely grooved throughout, the grooves being minutely punctured and the intermediate ridges prettily tessellated with white and reddish brown.

MITRA DESHAYESII. *Mitr. testâ subfusiformi, spirâ turritâ, anfractibus supernè angulatis, ad angulum nodosis, infra lævibus; livido-viridescente, nodis aurantio-coccineis, strigis in medio interruptis e nodis descendentibus; columellâ quadriplicatâ.*
Conch. Icon., *Mitra*, pl. 22. f. 170.
Hab. —— ?
I have two examples of this extremely interesting species from the collection of M. Deshayes, and two from that of Thomas Norris, Esq.

MITRA PRUINOSA. *Mitr. testâ ovato-fusiformi, spirâ acuminatâ, lineis impressis longitudinalibus et transversis decussatim exsculptis; spadiceo-fuscescente, strigis niveis brevibus angustis e suturis subirregulariter descendentibus; columellâ quadriplicatâ.*
Conch. Icon., *Mitra*, pl. 22. f. 171.
Hab. —— ?
This is another peculiarly characteristic species for which I have no locality.

MITRA SOLANDRI. *Mitr. testâ ovato-oblongâ, crassiusculâ, spirâ elevatâ, apice subobtuso; undique sulcatâ, sulcis latiusculis, confertis, peculiariter subtilissimè corrugatis, liris intermediis angustis, carinæformibus; pallidè fusco alboque fasciatâ; columellâ quadriplicatâ.*
Hab. —— ?
An ancient species described many years since in manuscript by Dr. Solander under a name that is occupied.

MITRA FLAMMIGERA. *Mitr. testâ fusiformi, spirâ acutè acuminatâ, suturis impressis; anfractibus supernè tumidiusculis, transversim undique liratis, liris alternis majoribus, interstitiis lineis impressis decussatis; albidâ, flammis latiusculis spadiceis longitudinalibus pictâ; columellâ quinqueplicatâ.*
Conch. Icon., *Mitra*, pl. 22. f. 173.
Hab. —— ?
The sculpture of this attractive species approaches very nearly to that of the *Mitra interlirata*, from which it differs more materially in form.

MITRA LORICATA. *Mitr. testâ fusiformi, utrinque attenuatâ, spiræ anfractibus plano-convexis; fortiter noduloso-granosis, granis regularibus, seriatim creberrimè digestis; albidâ, maculis perpaucis aurantio-fuscescentibus hic illic fasciatim tinctâ; columellâ quinqueplicatâ.*
Conch. Icon., *Mitra*, pl. 22. f. 174.
Hab. —— ?
The entire surface of this species, from the collection of W. Met-, Esq., is very strongly closely granulated.

Digitized by Google

MITRA MACULOSA. *Mitr. testâ oblongo-ovatâ, spirâ brevisculâ, suturis impressis; anfractibus transversim punctato-striatis, parte superiori lutescente-albâ fuscescente partim tinctâ, infra castaneo-fuscâ albipunctatâ; columellâ quinqueplicatâ; labro intus supernè sinuato.*

Conch. Icon., *Mitra*, pl. 22. f. 175.

Hab. Australia and island of Annaa, Pacific Ocean (found at the latter place on the reefs); Cuming.

This species may be recognised by its peculiarity of colouring, the upper portion of the whorls being nearly white, stained just here and there with brown, the lower chestnut-brown speckled with white dots.

MITRA PROSCISSA. *Mitr. testâ oblongo-ovatâ, utrinque attenuatâ, spiræ anfractibus contiguis, suturis impressis; transversim undiquè liratis, liris latiusculis, obtuso-convexis, confertis, interstitiis angustis, subtilissimè cancellatis; albidâ, maculis aurantio-fuscescentibus bifasciatim tinctâ.*

Conch. Icon., *Mitra*, pl. 22. f. 177.

Hab. ——?

It may be as well to caution the reader against confounding this shell with the *Mitra ferruginea*, a name which I have seen erroneously attached to it in one or two important collections.

MITRA ROTUNDILIRATA. *Mitr. testâ oblongo-ovatâ, utrinque attenuatâ, transversim undique liratâ, liris rotundis, confertis, interstitiis angustis, striis elevatis decussatis; aurantio-castaneâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 23. f. 178.

Hab. ——?

The ridges of this shell are peculiarly rounded, and impart a kind of crimped appearance to the lip.

MITRA RUPPELLII. *Mitr. testâ fusiformi-ovatâ, basim versus leviter contractâ, transversim undique liratâ, liris subrotundis, interstitiis lævibus; castaneo-fuscâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 23. f. 179.

Hab. Red Sea; Rüppell.

An interesting species, in which the ridges are almost as rounded as in the former; they are however wider apart, and the interstices are not crossed with raised striæ.

MITRA TICAONICA. *Mitr. testâ ovatâ, crassâ, solidâ, spirâ brevi, suturis profundis; anfractibus transversim undique exiliter sulcatis, juxta suturas lævisculis; spadiceo-brunneâ, aperturæ fauce vividè purpureo-fuscâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 23. f. 181.

Hab. Island of Ticao, Philippines (found on the reefs at low water); Cuming.

A very characteristic stout solid species, with a dark purple-brown richly-enamelled mouth.

Digitized by Google

MITRA PLANILIRATA. *Mitr. testâ oblongo-ovatâ, spirâ subacuminatâ, transversim undique sulcatâ, liris intermediis peculiariter planulatis; fuscâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 23. f. 184.

Hab. ——?

This species may be easily distinguished from those which it so nearly resembles in general appearance by its peculiarly flattened ridges.

MITRA PEREGRA. *Mitr. testâ oblongo-ovatâ, spirâ subobtusâ; transversim fortiter sulcatâ, sulcis pertusis; rubidâ, liris transversis profusè albimaculatis; columellâ quinqueplicatâ.*

Conch. Icon., *Mitra*, pl. 24. f. 186.

Hab. Island of Masbate, Philippines (found under stones at low water); Cuming.

This species, which appears to be figured by Kiener for the *Mitra nucleola*, may be connected by a series of intermediate varieties with the *Mitra cucumerina*.

MITRA ASTRICTA. *Mitr. testâ oblongo-ovatâ, basi truncatâ; anfractibus lævibus, cinereo-fuscis, fasciâ albidâ infra suturam, lineisque fuscescentibus parallelis crebris undique cinctis; columellâ quadriplicatâ; labro subeffuso.*

Conch. Icon., *Mitra*, pl. 24. f. 188.

Hab. ——?

The entire surface of this shell is enlaced with fine brown lines.

MITRA SINENSIS. *Mitr. testâ cylindraceo-oblongâ, crassâ, spirâ brevissimâ, acutâ; transversim crebriliratâ, liris angustis, prominentibus, granosis, lineisque longitudinalibus impressis exilibus decussatâ; fuscâ; columellâ decemplicatâ, callositate conspicuâ supernè armatâ; intus fuscâ, nitidè encausticâ.*

Conch. Icon., *Mitra*, pl. 24. f. 190 *b*.

Mitra crenulata (pars), Kiener, Icon., f. 105 *a*.

Hab. Coast of China.

This fine species, though one of great rarity, has been probably confounded hitherto with the *Mitra crenulata*, an error into which I had myself fallen, until the arrival of a magnificent specimen most liberally forwarded to me for inspection by M. Gruner of Bremen, and which has been invaluable as the means of establishing a new and very important species. It differs entirely from the *Mitra crenulata*, independent of colouring and size, in the character of its sculpture, whilst the columella has an additional number of plaits and is armed with a remarkable callosity at the summit.

MITRA GLANS. *Mitr. testâ ovatâ, subcylindraceâ, supernè obesâ, crassâ, solidâ, spirâ brevissimâ, partim occultâ; longitudinaliter obtuso-costellatâ, costellis fortiter granulosis; vividè aurantio-fuscâ, granulis albidis, intus albâ; columellâ octoplicatâ.*

Conch. Icon., *Mitra*, pl. 24. f. 191.

Hab. Island of Masbate, Philippines (found on the reefs at low water); Cuming.

Digitized by Google

Characterized by its very distinctly granulated sculpture, and by its short obese form.

MITRA UNDULOSA. *Mitr. testâ cylindraceo-ovatâ, crassâ, spirâ brevissimâ; læviusculâ, lineis exiliter impressis undique cinctâ; albâ, lineis fuscis cingulatâ, undulisque fuscis angustis longitudinalibus variegatâ; columellâ octoplicatâ.*

Conch. Icon., *Mitra*, pl. 24. f. 192.

Hab. Island of Ticao, Philippines (found among coral sand on the reefs at low water); Cuming.

The lineated character of the painting is so different from that of the *M. crenulata*, that I cannot refrain from separating it as a distinct species.

MITRA NANUS. *Mitr. testâ abbreviato-ovatâ, spirâ brevi, acutâ, transversim undique sulcatâ, sulcis basin versus profundioribus; rubido-fuscâ, balteo angusto flavicante, peculiariter albimaculato, cinctâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 24. f. 193.

Hab. ——?

Distinguished by its narrow yellow belt, which has a peculiar white knotted appearance.

MITRA PORPHYRITICA. *Mitr. testâ obeso-ovatâ, basi subgranosâ, spirâ acutè turritâ; longitudinaliter plicato-costatâ, costis angulatis; anfractibus supra albicantibus, infra olivaceo-cinereis, albizonulatis; columellâ quadriplicatâ; aperturâ brevi.*

Conch. Icon., *Mitra*, pl. 25. f. 195.

Hab. Island of Ticao, Philippines (found under stones at low water); Cuming.

A short stout species, with a sharp angularly turreted spire, encircled with bands of a peculiarly livid olive-ash colour.

MITRA VIRGATA. *Mitr. testâ oblongo-ovatâ, spirâ brevi, apice acuminatâ; lævigatâ, nitidâ, basin versus impresso-striatâ; nigerrimo-fuscâ, virgis albis longitudinalibus flexuosis, interdum medio interruptis, ornatâ, anfractu ultimo zonulâ pallidâ angustâ nonnunquam supernè cingulato; columellâ quadriplicatâ; labro medio contracto, supernè sinuato.*

Conch. Icon., *Mitra*, pl. 25. f. 197 *a* and *b*.

Mitra retusa, var., Gray; Zool. Beechey's Voyage.

Hab. Island of Luzon, Philippines (found under stones and in crevices of rocks); Cuming.

This species is exactly intermediate between the *Mitræ paupercula* and *retusa*.

MITRA CHRYSALIS. *Mitr. testâ ovatâ, spirâ brevi, subretusâ; transversim undique sulcatâ; fuscâ aut fuscescente, anfractu ultimo maculis interruptis medio uniseriatim cincto; columellâ quadriplicatâ; labro medio contracto.*

Conch. Icon., *Mitra*, pl. 25. f. 200.

Hab. ——?

Digitized by Google

May be distinguished from the young of the *Mitra cucumerina* by its peculiarly contracted lip.

MITRA CONCINNA. *Mitr. testâ ovatâ, basi contractâ, spirâ turritâ; anfractibus supernè angulatis, longitudinaliter costatis, costis angulum super granoso-mucronatis, liris parvis obtusis transversim decussatis; liris transversis vividè luteis, interstitiis nigricante-castaneis; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 26. f. 203.

Hab. Island of Masbate, Philippines (found under stones at low water); Cuming.

A bright prettily painted species, very closely approximating in form and sculpture to the *Mitra crocata*.

MITRA VENUSTULA. *Mitr. testâ ovatâ, spirâ acuminatâ, anfractibus convexis, longitudinaliter granoso-costatis, vividè luteis, zonulis angustis nigerrimo-castaneis duabus tribusve cingulatis; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 26. f. 204.

Hab. Island of Masbate, Philippines (found under stones at low water); Cuming.

The whorls of this species have not the same angular structure as those of the preceding, nor are the ribs granosely pointed at the upper extremity.

MITRA FLAVESCENS. *Mitr. testâ ovatâ, spirâ subacuminatâ, anfractibus longitudinaliter costatis, costis supernè subnodosis, liris granosis decussatis; flavescente, zonâ fuscâ medio albilineatâ cinctâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 26. f. 207.

Hab. Island of Masbate, Philippines (found under stones at low water); Cuming.

Allied to the preceding species by its style of sculpture, but differng in form and pattern of colouring.

MITRA VARIATA. *Mitr. testâ ovatâ, basi contractâ, spirâ turritâ; anfractibus supernè angulatis, longitudinaliter costatis, costis latiusculis, obtuso-prominentibus, interstitiis transversim impresso-striatis; luteâ, ustulato-fusco variè fasciatâ et lineolatâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 26. f. 209.

Hab. ——?

This shell exhibits a beautiful variation of colour; the ribs are not crossed with granose ridges, like those of the *Mitræ concinna, crocata,* and *flavescens*, but have the interstices engraved with fine impressed striæ.

MITRA AFFINIS. *Mitr. testâ ovatâ, spirâ acuminato-turritâ; anfractibus longitudinaliter obtuso-costatis, costis liris planiusculis transversis decussatis; aurantio-rubrâ, fasciâ luteo-albicante cingulatâ; columellâ quadriplicatâ.*

Conch. Icon., *Mitra*, pl. 26. f. 211.

Digitized by Google

Hab. Island of Masbate, Philippines (found under stones at low water); Cuming.

The specific differences of this shell are not of an unimportant character; the cross ridges are somewhat flattened, the white band is broader, and the granules are of the same uniform colour as the ground.

MITRA TURBEN. *Mitr. testâ oblongo-ovatâ, basi attenuatâ, spirâ obtuso-rotundatâ, suturis subprofundis; longitudinaliter creberrimè plicato-costellatis, costellis interstitiisque transversim impresso-striatis; aurantio-lutescente; columellâ quinqueplicatâ, plicis prominentibus; aperturâ intus striatâ.*

Conch. Icon., *Mitra*, pl. 27. f. 213.

Hab. Philippine Islands (found under stones at low water); Cuming.

It is a curious fact that the whole of the specimens of this species collected by Mr. Cuming have the lower portion of the lip broken away.

MITRA CITRINA. *Mitr. testâ ovato-conicâ, supernè rotundatâ, solidiusculâ, spirâ brevi, apicem versus subtiliter sulcatâ, apice elato, acuto; lævigatâ, aurantio-citrinâ, livido-castaneo variè tinctâ; columellâ quinqueplicatâ; aperturâ longissimâ.*

Conch. Icon., *Mitra*, pl. 27. f. 215 *a* and *b*.

Hab. —— ?

A new and very remarkable Cone-like species, in the collection of Thomas Lombe Taylor, Esq., of Starston, Norfolk.

December 24, 1844.

No business was transacted.

Digitized by Google

Digitized by Google

INDEX.

The names of New Species and of Species newly characterized are printed in Roman Characters: those of Species previously known, but respecting which novel information is given, are printed in *Italics*: those of Species respecting which Anatomical Observations are made, are printed in CAPITALS.

	Page
Abrocoma	156
Acanthylis bicolor, Gray	99
Ægotheles leucogaster, *Gould*	106
Alauda arvensis, Linn.	66
—— *brachydactyla*, Temm.	66
—— *cristata?* Linn.	66
Alcedo ispida, Linn.	64
Amadina Gouldiæ, *Gould*	5
Amphidesma	159
Amphidesma carnicolor, *Hanley*	162
—— scabrum, *Hanley*	17
—— Zebuense, *Hanley*	17
Anatina truncata	91
Andropadus gracilirostris, *Strick.*	101
—— latirostris, *Strick.*	100
Anous ——?	36
—— *stolidus*	35
Anthus pratensis, Bechst.	66
Antilope scripta	123
Aphriza Townsendii, Aud.	157
Aptenodytes minor	58
—— undina, *Gould*	57
Arca ambigua, *Reeve*	47
—— angicostata, *Reeve*	46
—— anomala, *Reeve*	39
—— *antiquata*	43
—— *Brasiliana*	45
—— *bullata*	125
—— bullata, *Reeve*	126
—— cælata, *Reeve*	126
—— cepoides, *Reeve*	47
—— chalcanthum, *Reeve*	44
—— cistula, *Reeve*	41
—— clathrata, *Reeve*	44
—— cometa, *Reeve*	127
—— compacta, *Reeve*	41
—— contraria, *Reeve*	45
—— cornea, *Reeve*	40
—— crebricostata, *Reeve*	46
—— crenata, *Reeve*	45
—— cunealis, *Reeve*	124
—— cuneata, *Reeve*	42
—— cymbæformis, *Reeve*	41
—— *cymbæformis*	47
Arca disparilis, *Reeve*	46
—— Donaciformis, *Reeve*	125
—— fasciata, *Reeve*	125
—— ferruginea, *Reeve*	43
—— Gambiensis, *Reeve*	42
—— gibbosa, *Reeve*	40
—— globosa, *Reeve*	45
—— gubernaculum, *Reeve*	40
—— Hankeyana, *Reeve*	47
—— hians, *Reeve*	47
—— holoserica, *Reeve*	39
—— *imbricata*	126
—— *inæquivalvis*	45
—— *incongrua*	45
—— inflata, *Reeve*	41
—— Japonica, *Reeve*	42
—— *lacerata*	124
—— *lactea*	127
—— lateralis, *Reeve*	127
—— lima, *Reeve*	125
—— loricata, *Reeve*	46
—— Luzonica, *Reeve*	44
—— maculosa, *Reeve*	40
—— minuta, *Reeve*	127
—— *Modiolæformis*, Desh.	124
—— *mutabilis*	124
—— myristica, *Reeve*	43
—— navicella, *Reeve*	127
—— *Noæ*	126
—— obliqua, *Reeve*	43
—— obtusa, *Reeve*	123
—— occlusa, *Reeve*	47
—— ocellata, *Reeve*	125
—— olivacea, *Reeve*	127
—— ovata, *Reeve*	44
—— pertusa, *Reeve*	41
—— pilula, *Reeve*	39, 40
—— pulchella, *Reeve*	128
—— *pusilla*	126
—— radiata, *Reeve*	43
—— *reversa*	46
—— rotundicostata, *Reeve*	44
—— rufescens, *Reeve*	45
—— *scapha*	40

Digitized by Google

	Page
Arca sculptilis, *Reeve*	128
—— secticostata, *Reeve*	43
—— setigera, *Reeve*	124
—— striata, *Reeve*	128
—— symmetrica, *Reeve*	127
—— *symmetrica*	128
—— tenebrica, *Reeve*	126
—— tenella, *Reeve*	124
—— vellicata, *Reeve*	42
—— virescens, *Reeve*	124
—— volucris, *Reeve*	126
—— Zebuensis, *Reeve*	128
Arctomys Empetra, Schreb.	8
Ardea cinerea, Linn.	66
—— *comata*, Pall.	67
—— *garzetta*, Linn.	67
—— minuta, Linn.	10
Atrichia clamosa, *Gould*	2
Attagis Gayi, Less.	157
Balæna Boops, Auct.	96, 145
Bifrontia, Desh.	24
Bos Sylhetanus, F. Cuv.	145
Botaurus stellaris, Steph.	67
Brachyglossa Atropos	164
Bradypus didactylus	93, 95
—— didactylus, Linn.	96, 146
—— *tridactylus*	167
Buccinum chlorostoma	48
Budytes neglecta, Cuv.	66
Byssoarca pusilla, Sow.	126
Calidris arenaria, Ill.	157
Camelus Sivalensis, Hors.	88
Canis Azaræ	153
—— Bengalensis, Shaw	7
—— cinereo-argenteus, Schreb.	7
—— *fulvipes*	153
—— *Magellanicus*	153
Capra Caucasica, Guld.	8
—— Hircus, var.	8
Cardium assimile, *Reeve*	169
—— Australiense, *Reeve*	168
—— *consors*	168
—— *Donaciforme*	168
—— hystrix, *Reeve*	168
—— incarnatum, *Reeve*	167
—— *isocardia*	168
—— Mindanense, *Reeve*	167
—— oviputamen, *Reeve*	168
—— rubicundum, *Reeve*	169
—— *serratum*	168
—— *subelongatum*	169
—— vitellinum, *Reeve*	168
Castor Fiber, Linn.	9
Cebus	81
Cercopithecus pileatus	3
—— *radiatus*	83
—— *ruber*	83
Cervus Virginianus, Ray	7
Chætura bicolor, Gray	99
Chamæleon	163

	Page
Charadrius hiaticula, Linn.	67
—— *pluvialis*, Linn.	67
Chione	110
Circe scripta	109
Circus rufus, Briss.	64
Cirrus, Sow.	24
Cleodora	163
Colossochelys Atlas, *Falconer*	54, 84
—— *Atlas*, Falconer	85
Columba leucocephala, Ray	10
—— mystacea, Temm.	10
Columbæ	10
Columbella achatina, *G. B. Sow.*	50
—— aspersa, *G. B. Sow.*	49
—— atomella, *G. B. Sow.*	53
—— atramentaria, *G. B. Sow.*	51
—— blanda, *G. B. Sow.*	51
—— Broderipii, *G. B. Sow.*	53
—— catenata, *G. B. Sow.*	52
—— chlorostoma, *G. B. Sow.*	48
—— coniformis, *G. B. Sow.*	49
—— decussata, *G. B. Sow.*	51
—— dichroa, *G. B. Sow.*	50
—— dormitor, *G. B. Sow.*	53
—— Duclosiana, *G. B. Sow.*	48
—— fabula, *G. B. Sow.*	50
—— Guildingii, *G. B. Sow.*	53
—— guttata, *G. B. Sow.*	50
—— impolita, *G. B. Sow.*	51
—— jaspidea, *G. B. Sow.*	50
—— Krausii, *G. B. Sow.*	53
—— Ligula, *G. B. Sow.*	49
—— miser, *G. B. Sow.*	50
—— monilifera, *G. B. Sow.*	53
—— nigricans, *G. B. Sow.*	52
—— nivea, *G. B. Sow.*	51
—— obscura, *G. B. Sow.*	49
—— parva, *G. B. Sow.*	52
—— pœcila, *G. B. Sow.*	48
—— Puella, *G. B. Sow.*	52
—— pusilla, *G. B. Sow.*	53
—— rudis, *G. B. Sow.*	48
—— rugulosa, *G. B. Sow.*	51
—— splendidula, *G. B. Sow.*	49
—— subulata, *G. B. Sow.*	52
—— suffusa, *G. B. Sow.*	52
—— Ticaonis, *G. B. Sow.*	51
—— venusta, *G. B. Sow.*	49
—— vulpecula, *G. B. Sow.*	50
Columbus coronatus	136
Corbula adusta, *Hinds*	26
—— aurita, *Hinds*	26
Corbula, Bruguières	26
Corbula carnosa, *Hinds*	26
—— crispa, *Hinds*	26
—— procera, *Hinds*	26
Cossypha poensis, *Strick.*	100
—— *reclamator*, Vieill.	100
Criniger	101
Crocodilus longirostris	85

Digitized by Google

	Page
Cryptospira	76
Cuculus canorus, Linn.	66
Curruca cinerea, Bechst.	65
—— *melanocephala*, Lath.	65
—— *orphea*, Gould	65
Cursorius Isabellinus	66, 153
Cyanopterus fretensis, Eyton	157
Cyllene	152
Cymba	150
Cynocephalus	81
Cypselus parvus, Licht.	99
Cyrena	64, 159
Cyrena Carolinensis	159
—— *Keraudreni*	160
—— *obesa*	160
—— Philippinarum, *Hanley*	159
—— placens, *Hanley*	160
—— radiata, *Hanley*	159
—— *radiata*	159, 160
—— *rotundata*	160
—— sordida, *Hanley*	159
Cytherea	109
Cytherea argentea	110
—— cor, *Hanley*	110
—— Hindsii, *Hanley*	110
—— *læta*	109
—— obliquata, *Hanley*	109
—— *obliquata*	109
—— *pellucida*	109
—— Philippinarum, *Hanley*	110
—— plebeia, *Hanley*	109
—— varians, *Hanley*	109
Dafila pyrogaster, Eyton	157
—— *urophasianus*, Eyton	157
Dasypus sex-cinctus, Auct.	96
—— villosus, Desm.	96, 146
Deilephila Elpenor	164
—— *Euphorbiæ*	164
Delphinula	25
Dermestes lardarius	36
Didelphis elegans	154
Didus solitarius, Gmelin	77
Donacina	71
Dosina	162
Echini	164
Echymys	156
Edentata	94
Edentula	144
Elephas Indicus, Cuv.	96
Emys tectum	85
Erethizon dorsatum, F. Cuv.	9
Eulabeornis castaneoventris, *Gould*.	56
Euomphalus, Sow.	24
Felis Bengalensis, Desm.	7
—— Leo	54
—— *Melanura*	128
Fringilla Canariensis	1
Gallinæ	10
Gallinula chloropus, Lath.	67
Garrulus cristatus, Vieill.	9

	Page
Geopelia placida, *Gould*	55
—— tranquilla, *Gould*	56
Glauconome angulata, *Reeve*	20
—— cerea, *Reeve*	21
—— curta, *Reeve*	20
—— corrugata, *Reeve*	20
—— radiata, *Reeve*	20
—— rugosa, *Reeve*	19
—— straminea, *Reeve*	20
—— virens, *Hanley* } Solen virens, *Linn.* }	18, 19
Grallatores	10
Granivoræ	9
Halmaturus Billardieri, Gould	146
—— dama, *Gould*	33
—— Houtmanni, *Gould*	31
—— *manicatus*	35
—— *Thelidis*	33
Hapale Jacchus	82
Hapalotis albipes	104
—— longicaudata, *Gould*	104
Helicites, Schlot.	24
Hesperomys megalonyx, *Waterh.*	154
Himantopus melanopterus, Meyer	67
Hipparchia Melampus	163
Hirundinidæ	99
Hydrochærus Capybara, Erxl.	96
Hypsiprymnus platyops, *Gould*	103
—— setosus, Ogilb.	9
Hystricina	157
Ieracidea occidentalis, *Gould*	105
Ibis Falcinellus, Temm.	67
—— ruber, Lacep.	10
Iguanodon	54
Insectivoræ	9
Labyrinthodon	54
Lagopus ferrugineus, *Fraser*	37
Lagorchestes albipilis	33
—— hirsutus, *Gould*	33
Lagotis Cuvieri, Benn.	154
Laniidæ, *Laniinæ*	102
Lanius excubitor? Linn.	64
—— *rufus*, Briss.	65
Leptodactylus	157
Leptopus Mitchellii, *Fraser*	157
Lernea Sprattæ, Pennant	38
Lerneonema monillaris, Milne Edw.	38
Leucaria littoralis	163
Limosa melanura, Leisl.	67
Lithodomus canaliferus, *Hanl.*	16
—— plumula, *Hanl.*	17
Lophyrus Victoriæ, *Fraser*	136
Loris	89
Loris gracilis	4
Loxia cœrulea, Linn.	10
Macacus Sinicus, F. Cuv.	3
Macropodidæ	163
Macropus gracilis, *Gould*	103
—— *lunatus*	103
—— *ocydromus*, *Gould*	33

Digitized by Google

	Page
MACROPUS OCYDROMUS, Gould ...	146
Mactroides, Born, Chemn.	110
Malurinæ	100
Malurus Acaciæ? Rüpp.	66
—— pulcherrimus, *Gould*	106
Marginella Australis, *Hinds*	75
—— *avena*, Valenc.	75
—— Belcheri, *Hinds*	73
—— blanda, *Hinds*	76
—— *cærulescens*	74
—— *Cleryii*	73
—— constricta, *Hinds*	74
—— fusiformis, *Hinds*	75
—— imbricata, *Hinds*	76
—— *interrupta*	76
—— livida, *Hinds*	73
—— *maculosa*, Kiener	76
—— muralis, *Hinds*	76
—— musica, *Hinds*	73
—— nitida (Volvarina), *Hinds*	75
—— nivosa, *Hinds*	74
—— nodata, *Hinds*	73
—— piperata, *Hinds*	72
—— pruinosa, *Hinds*	74
—— *prunum*	74
—— sagittata, *Hinds*	76
—— sapotilla, *Hinds*	74
—— scripta, *Hinds*	73
—— tricincta, *Hinds*	76
—— vitrea, *Hinds*	75
MARSUPIATÆ	9
Mastodon elephantoides	88
Megalosaurus	54
Megapodiinæ	77
Megascolex cæruleus, *Templeton* ...	89
MELLIVORA CAPENSIS, F. Cuv. ...	145
Melo	150
Milvago megalopterus, Meyen	157
Mitra	167
Mitra abbatis	180
—— acupicta, *Reeve*	174
—— affinis, *Reeve*	186
—— *anthracina*	179
—— astricta, *Reeve*	184
—— badia, *Reeve*	181
—— balteolata, *Reeve*	171
—— *balteolata*	175
—— cadaverosa, *Reeve*	181
—— caliginosa, *Reeve*	177
—— carnicolor, *Reeve*	181
—— cavea, *Reeve*	180
—— chalybeia, *Reeve*	172
—— choava, *Reeve*	178
—— chrysalis, *Reeve*	185
—— *circulata*	177
—— citrina, *Reeve*	187
—— coccinea, *Reeve*	171
—— cærulea, *Reeve*	176
—— concentrica, *Reeve*	177
—— concinna, *Reeve*	186

	Page
Mitra crebrilirata, *Reeve*	174, 175
—— *crenulata*	184, 185
—— *crocata*	186
—— *cucumerina*	184, 186
—— Cumingii, *Reeve*	173
—— cylindracea, *Reeve*	175
—— declivis, *Reeve*	170
—— decurtata, *Reeve*	180
—— Dennisoni, *Reeve*	169
—— Deshayesii, *Reeve*	182
—— *ebenus*	175
—— *exasperata*	181
—— *ferruginea*	183
—— flammigera, *Reeve*	182
—— flavescens, *Reeve*	186
—— floccata, *Reeve*	170
—— fulgetrum, *Reeve*	176
—— fulgurita, *Reeve*	172
—— funerea, *Reeve*	176
—— funiculata, *Reeve*	177
—— *glabra*	171
—— glans, *Reeve*	184
—— gracilis, *Reeve*	170
—— *granatina*	170
—— Gruneri, *Reeve*	177
—— Hindsii, *Reeve*	181
—— histrio, *Reeve*	179
—— ignobilis, *Reeve*	180
—— impressa, *Reeve*	178
—— infecta, *Reeve*	173
—— inquinata, *Reeve*	170
—— interlirata, *Reeve*	173
—— *interlirata*	182
—— lacunosa, *Reeve*	172
—— latruncularia, *Reeve*	181
—— lignaria, *Reeve*	172
—— livida, *Reeve*	178
—— loricata, *Reeve*	182
—— *lyriformis*, Swains.	151
—— maculosa, *Reeve*	183
—— *mucronata*	177
—— nanus, *Reeve*	185
—— Norrisii, *Reeve*	169
—— *nucleola*	184
—— obeliscus, *Reeve*	175
—— obesa, *Reeve*	174
—— oleacea, *Reeve*	175
—— *paupercula*	185
—— pellis-serpentis, *Reeve*	172
—— peregra, *Reeve*	184
—— planilirata, *Reeve*	184
—— *plicata*	171, 175
—— polita, *Reeve*	174
—— *polita*	175
—— porphyritica, *Reeve*	185
—— pretiosa, *Reeve*	176
—— proscissa, *Reeve*	183
—— pruinosa, *Reeve*	182
—— pulchella, *Reeve*	179, 180
—— pullata, *Reeve*	175

Digitized by Google

	Page
Mitra retusa	185
—— robusta, *Reeve*	179
—— *rosea*, Duclos	174
—— rotundilirata, *Reeve*	183
—— rubiginosa, *Reeve*	173
—— rubritincta, *Reeve*	179
—— rupicola, *Reeve*	171, 172
—— Ruppellii, *Reeve*	183
—— Senegalensis, *Reeve*	177
—— Sinensis, *Reeve*	184
—— Solandri, *Reeve*	182
—— solida, *Reeve*	170
—— solidula, *Reeve*	178, 179
—— speciosa, *Reeve*	180
—— *subulata*, Lam.	174
—— *sulcata*	177
—— telescopium, *Reeve*	180
—— Ticaonica, *Reeve*	183
—— tumida, *Reeve*	171
—— turben, *Reeve*	187
—— undulosa, *Reeve*	185
—— ustulata, *Reeve*	174
—— *ustulata*	180
—— variabilis, *Reeve*	175
—— variata, *Reeve*	186
—— variegata, *Reeve*	176
—— venustula, *Reeve*	186
—— virgata, *Reeve*	185
—— *Woldemarii*	179
—— Zebuensis, *Reeve*	173
—— *Ziervogeliana*	178, 179
Modiola arcuatula, *Hanley*	16
—— biradiata, *Hanley*	15
—— *discrepans*	16
—— Metcalfii, *Hanley*	14
—— *Modiolus*	15, 16
—— *Ovenii*	16
—— Philippinarum, *Hanley*	15
—— sordida, *Hanley*	16
—— striatula, *Hanley*	14
—— strigata, *Hanley*	15
—— subramosa, *Hanley*	14
—— *sulcata*, Lam.	15
Moschus Stanleyanus, Gray	7
Motacilla neglecta, Gould	66
Muridæ	156
Mus Darwinii	154
—— messorius, Shaw	8
—— *sylvaticus*	105
Muscicapa albicollis, Temm.	64
—— Fraseri, *Strick.*	101
—— *grisola*, Linn.	64
—— *latirostris*, Swains.	102
Muscicapidæ, Muscicapinæ	101
Myadora, Gray	91
Myadora brevis, *Reeve*	93
—— crassa, *Reeve*	92
—— curvata, *Reeve*	93
—— oblonga, *Reeve*	93
—— ovata, *Reeve*	92

	Page
Myadora Pandoræformis, *Reeve*	93
—— plana, *Reeve*	92
—— *plana*	93
—— striata, *Reeve*	93
—— *striata*	92
—— *tincta*, Reeve	92, 93
—— trigona, *Reeve*	92
Myopotamus Coypus, Desm.	96
—— *Coypus*	154
Myoxidæ	157
Mytilacea	14
Mytilus granulatus, *Hanl.*	17
Nassa	121
Neæra	62
Neæra, Gray	97
Neæra cochlearis, *Hinds*	98
—— lyrata, *Hinds*	97
—— tenuis, *Hinds*	97
Octodon	156
Octodon Bridgesii, *Waterh.*	155
—— *Cumingii*	154, 155
—— *Degus*	155
Octodontidæ	156
Odostomia eulimoides, *Hanl.*	18
—— Rissoides, *Hanl.*	18
—— turrita, *Hanl.*	18
Omalaxis, Deshayes	24
Omnivoræ	9
Oriolus galbula, Linn.	65
Orpheus rufus	9
Otis Houbara	66, 153
Ovis Tragelaphus	95
—— Tragelaphus, Desm.	145
Pachycephala Gilbertii, *Gould*	107
Pandora brevis	91
Papio	81, 82
Papio Rhæsus	83
Parus major, Linn.	9
Perameles arenaria, *Gould*	104
Perdix Bonhami, Fraser	10
—— *petrosa*, Lath.	66
Petricola ochroleuca, Lam.	166
Phænospira	72
Phalacrocorax albigula, Brandt	157
Phalangista gliriformis	164
Phascogale calurus, *Gould*	104
—— *penicillata*	105
—— crassicaudata, *Gould*	105
Phoca vitulina, Linn.	96
Phœnicura ruticilla, Swains.	65
Phylloscopus	99
Pithecus Satyrus, Geoff.	96
Plyctolophus citrino-cristatus, *Fras.*	38
—— *sulphureus*	38
Podiceps Australis, *Gould*	135
—— *cristatus*	135
Poephagomys	156
Poephagomys ater	154
Pollicipes Cornucopia	164
Prinia icterica, *Strick.*	100

Digitized by Google

	Page
Prinia olivacea, *Strick.*	99
Procellaria leucoptera, *Gould*	57
—— Solandri, *Gould*	57
Procellaridæ	57
Psammobia	60, 165
Psittacus Timneh, *Fraser*	38
PSOPHIA CREPITANS, Linn.	146
Psophodes nigrogularis, *Gould*	5
Puffinus carneipes, *Gould*	57
Pycnonotinæ	100
Pycnonotus flavirictus, Strick.	101
Pyrgita domestica? Cuv.	66
Rallidæ	56
Rana esculenta	109
Ranella albivaricosa, *Reeve*	136
—— *anceps*	139
—— *bitubercularis*	140
—— *cælata*	137
—— *caudata*, Say	116
—— coriacea, *Reeve*	137
—— cuspidata, *Reeve*	139
—— *foliata*	137
—— *granifera*, Kiener	138
—— hastula, *Reeve*	139
—— livida, *Reeve*	138
—— *Muriciformis*	116, 139
—— nobilis, *Reeve*	137
—— plicata, *Reeve*	138
—— ponderosa, *Reeve*	137
—— *pulchra*	137
—— pustulosa, *Reeve*	137
—— rosea, *Reeve*	139
—— *scrobiculator*	138
—— siphonata, *Reeve*	138
—— triquetra, *Reeve*	139
—— tuberosissima, *Reeve*	139
—— venustula, *Reeve*	138
Rhynchaspis	1
Ringicula Australis, *Hinds*	97
—— caron, *Hinds*	97
—— exserta, *Hinds*	97
—— grandinosa, *Hinds*	96
—— propinquans, *Hinds*	96
RODENTIA	8
Salicaria galactotes, Gould	65
—— *phragmitis*, Selb.	65
Saturnia pyri	164
Saxicola —— *?*	65
Saxicola Deserti, Rüpp.	65
—— *Œnanthe*, Gould	65
—— *rubetra*, Bechst.	65
Scalaria aculeata, *G. B. Sow.*	12
—— acuminata, *G. B. Sow.*	31
—— *alata*	11
—— alata, *G. B. Sow.*	10
—— aurita, *G. B. Sow.*	26
—— bicarinata, *G. B. Sow.*	30
—— bullata, *G. B. Sow.*	27
—— Catanauensis, *G. B. Sow.*	27
—— *communis*	12

	Page
Scalaria concinna, *G. B. Sow.*	28
—— connexa, *G. B. Sow.*	28
—— dubia, *G. B. Sow.*	13
—— Elenensis, *G. B. Sow.*	29
—— fasciata, *G. B. Sow.*	11
—— friabilis, *G. B. Sow.*	27
—— fusca, *G. B. Sow.*	30
—— gracilis, *G. B. Sow.*	12
—— hexagona, *G. B. Sow.*	29
—— hyalina, *G. B. Sow.*	11
—— immaculata, *G. B. Sow.*	26
—— imperialis, *G. B. Sow.*	13
—— indistincta, *G. B. Sow.*	27
—— irregularis, *G. B. Sow.*	13
—— laxata, *G. B. Sow.*	11
—— Lyra, *G. B. Sow.*	13
—— marmorata, *G. B. Sow.*	11
—— Mindoroensis, *G. B. Sow.*	30
—— Mitræformis, *G. B. Sow.*	12
—— multicostata, *G. B. Sow.*	28
—— *muricata*, Kiener	13
—— obtusa, *G. B. Sow.*	29
—— ovalis, *G. B. Sow.*	29
—— Philippinarum, *G. B. Sow.*	12
—— polita, *G. B. Sow.*	30
—— pulcherrima, *G. B. Sow.*	28
—— pyramidalis, *G. B. Sow.*	12
—— replicata, *G. B. Sow.*	11
—— similis, *G. B. Sow.*	27
—— statuminata, *G. B. Sow.*	30
—— subtilis, *G. B. Sow.*	28
—— venosa, *G. B. Sow.*	13
—— *vestalis*, Hinds	27
Schizodon	156
Schizostoma, Bronn	24
SCIURUS LISTERI, Ray	8
—— MAXIMUS	146
Semnopithecus Leucoprymnus Cephalopterus	1
Semnopithecus Nestor	1
Siliquaria anguina	67
Solarium, Lam.	22
Solarium asperum, *Hinds*	23
—— cælatum, *Hinds*	25
—— dealbatum, *Hinds*	24
—— dorsuosum, *Hinds*	23
—— fenestratum, *Hinds*	25
—— formosum, *Hinds*	22
—— fragile, *Hinds*	24
—— fuliginosum, *Hinds*	158
—— fulvum, *Hinds*	24
—— *granulatum*	23
—— perdix, *Hinds*	22
—— *perspectivum*	22, 23, 158
—— placentale, *Hinds*	22
—— purpuratum, *Hinds*	25
—— quadriceps, *Hinds*	23
—— trochleare, *Hinds*	25
—— *trochleare*	158
—— virgatum, *Hinds*	24

Digitized by Google

	Page
Solariella, Searles Wood	24
Solenacea	19
Solidula	165
Sperantia sylvaria	163
Stenopidæ	5
Sterna fuliginosa	36
Stryx nyctea	19
Sturnella militaris, Vieill.	157
Synallaxis flavogularis, Gould	157
Talegalla	77
Tchitrea, Less.	102
Tellina acuta, Wood	62, 142
—— ala, *Hanley*	165
—— ancilla, *Hanley*	148
—— asperrima, *Hanley*	59
—— assimilis, *Hanley*	144
—— Aurora, *Hanley*	147
—— Bruguieri, *Hanley*	142
—— *Burnetti*	69
—— casta, *Hanley*	63
—— *casta*	63
—— *carnaria*	68
—— Chinensis, *Hanley*	165
—— Columbiensis, *Hanley*	71
—— Corbuloides, *Hanley*	70
—— *corbuloides*	144
—— *crucigera*	60, 72
—— Culter, *Hanley*	69
—— Cumingii, *Hanley*	59
—— cuspis, *Hanley*	72
—— *cuspis*	147
—— Cycladiformis, *Hanley*	70
—— cygnus, *Hanley*	144
—— cyrenoidea, *Hanley*	64
—— *decussata*, Lam.	68, 149
—— *depressa*, Lam.	72
—— Deshayesii, *Hanley*	148
—— Diana, *Hanley*	147
—— Discus, *Hanley*	63
—— Dombeyi, *Hanley*	144
—— *Donacina*	148, 164
—— eburnea, *Hanley*	61
—— elongata, *Hanley*	144
—— felix, *Hanley*	71
—— fimbriata, *Hanley*	149
—— *foliacea*	142
—— formosa, *Hanley*	142
—— *fragilis*, Linn.	166
—— frigida, *Hanley*	143
—— *Gargadia*	71
—— grandis, *Hanley*	141
—— gubernaculum, *Hanley*	142
—— Guildingii, *Hanley*	60
—— Hiberna, *Hanley*	148
—— hilaris, *Hanley*	140
—— imbellis, *Hanley*	143
—— inæqualis, *Hanley*	71
—— incarnata, *Hanley*	68
—— *incarnata*	72
—— inornata, *Hanley*	144
Tellina insculpta, *Hanley*	70
—— Irus, *Hanley*	166
—— Jubar, *Hanley*	60
—— juvenilis, *Hanley*	140
—— lacerideus, *Hanley*	61
—— Lilium, *Hanley*	147
—— *lintea*, Conrad	149
—— Listeri, *Hanley*	69
—— lucerna, *Hanley*	147
—— lux, *Hanley*	140
—— *lux*	141
—— Lyra, *Hanley*	68
—— *margaritacea*, Lam.	72
—— *Mexicana*	59
—— micans, *Hanley*	72
—— miles, *Hanley*	146
—— nobilis, *Hanley*	165
—— nux, *Hanley*	62
—— *nymphalis*	165
—— *oblonga*	147
—— *ostracea*	149
—— Owenii, *Hanley*	164
—— perplexa, *Hanley*	149
—— Pharaonis, *Hanley*	148
—— *Pharaonis*	164
—— Philippinarum, *Hanley*	69
—— *Philippinarum*	140
—— pinguis, *Hanley*	63
—— plebeia, *Hanley*	147
—— *polita*	148
—— princeps, *Hanley*	62
—— Prora, *Hanley*	61
—— *psammotella*	140
—— pudica, *Hanley*	62
—— puella, *Hanley*	165
—— *pulcherrima*	59, 60
—— pumila, *Hanley*	69
—— *punicea*	61
—— Rastellum, *Hanley*	59
—— regia, *Hanley*	61
—— robusta, *Hanley*	63
—— Rodon, *Hanley*	140
—— rubescens, *Hanley*	60
—— scalpellum, *Hanley*	147
—— Senegalensis, *Hanley*	68
—— sincera, *Hanley*	68
—— Sol, *Hanley*	142
—— *solidula*	69
—— Souleyeti, *Hanley*	71
—— Sowerbii, *Hanley*	62
—— *Sowerbii*	71
—— spectabilis, *Hanley*	141
—— *Spengleri*	59, 148
—— spinosa, *Hanley*	148
—— *splendida*, Anton	68
—— *squalida*	164
—— subtruncata, *Hanley*	149
—— *tenera*	140
—— *tenuis*	70, 141
—— *truncata*	142

Digitized by Google

	Page
Tellina tulipa, *Hanley*	148
—— *umbonella*, Lam.	144, 147
—— undulata, *Hanley*	72
—— Valtonis, *Hanley*	143
—— vernalis, *Hanley*	141
—— verrucosa, *Hanley*	60
—— vestalis, *Hanley*	141
—— *virgata*	60
—— virgo, *Hanley*	143
—— virgulata, *Hanley*	164
Tellinides purpurascens	62
—— *truncatulus*, Sow.	141
Tephrodornis Indica, Gray	102
—— *ocreatus*, Strick.	102
Testudo Indica	55
Tetrao Cupido	123
—— *umbellus*	123
Torinia, Gray	24
Trigona	110
Tringa variabilis	67
Triton acuminatus, *Reeve*	116
—— ægrotus, *Reeve*	114
—— angulatus, *Reeve*	120
—— anomalus, *Hinds*	22
—— antiquatus, *Hinds*	21
—— aquatilis, *Reeve*	114
—— *Australis*	113
—— bacillum, *Reeve*	120
—— bracteatus, *Hinds*	21
—— *canaliferus*	112, 113
—— *cancellinus*	115, 121
—— carduus, *Reeve*	121
—— *clavator*	111
—— concinnus, *Reeve*	120
—— crispus, *Reeve*	118
—— *cynocephalus*	114, 115
—— decapitatus, *Reeve*	119
—— decipiens, *Reeve*	121
—— digitale, *Reeve*	120
—— eburneus, *Reeve*	118
—— egregius, *Reeve*	119
—— elongatus, *Reeve*	117
—— encausticus, *Reeve*	115
—— exaratus, *Reeve*	116
—— exilis, *Reeve*	111
—— eximius, *Reeve*	119
—— ficoides, *Reeve*	116
—— fictilis, *Hinds*	21
—— gallinago, *Reeve*	110
—— gemmatus, *Reeve*	117
—— gracilis, *Reeve*	117
—— grandimaculatus, *Reeve*	113
—— lativaricosus, *Reeve*	120
—— *lotorium*	113
—— moritinctus, *Reeve*	115
—— *niveus*	116
—— obscurus, *Reeve*	117
—— pagodus, *Reeve*	121

	Page
Triton Pfeifferianus, *Reeve*	112
—— pictus, *Reeve*	121
—— *Quoyi*	118
—— Ranelloides, *Reeve*	111
—— *retusus*	115
—— ridens, *Reeve*	115
—— *rubecula*	117
—— sarcostoma, *Reeve*	113
—— Sauliæ, *Reeve*	112
—— *scrobiculator*, Lam.	138
—— sculptilis, *Reeve*	118
—— Sinensis, *Reeve*	113
—— siphonatus, *Reeve*	119
—— tessellatus, *Reeve*	120
—— Thersites, *Reeve*	115
—— tortuosus, *Reeve*	118
—— trilineatus, *Reeve*	114
—— truncatus, *Hinds*	21
—— *truncatus*	120
—— *tuberosus*	115
—— *variegatus*	113
—— verrucosus, *Reeve*	118
—— *vespaceus*	117
—— vestitus, *Hinds*	21
—— *viperinum*	118
Vanellus cristatus, Temm.	146
Veneridæ	19
Venus	159
Venus Chemnitzii, *Hanley*	160
—— *cingulata*, Lam.	162
—— decipiens, *Hanley*	162
—— *decorata*	161
—— *dysera*, Chemn.	161
—— *fasciata*	162
—— lacerata, *Hanley*	161
—— *Listeri*	161
—— Lyra, *Hanley*	161
—— *Marica*	160
—— *ovata*	161
—— *puerpera*	161
—— *reticulata*, Linn.	160
—— roborata, *Hanley*	161
—— scabra, *Hanley*	161
—— subnodulosa, *Hanley*	160
—— *variabilis*, Sow.	110
Vidua paradisæa, Cuv.	10
Voluta Cylleniformis, *Gray*	151
—— *fulminata*	151
—— Guildingii, *Gray*	151
—— *ignea*, Wood	174
—— *lyriformis*, Kiener	151
—— mammilla, *Gray*	149
—— megaspira, *Gray*	150
—— *nivosa*	150
—— Norrisii, *Gray*	150
—— piperita, *Gray*	150
Volvarina	75

END OF PART XII.

Printed by Richard and John E. Taylor, Red Lion Court, Fleet Street.

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

FALCONER BIOLOGY LIBRARY
STANFORD UNIVERSITY
STANFORD, CA. 94305

For
USE IN LIBRARY
ONLY
DO NOT REMOVE
FROM LIERARY

Digitized by Google

590.6
Z87
part 12
1844

FALCONER
BIOL. LIB.
NON CIRCULATING
DO NOT REMOVE
FROM THE LIBRARY

Digitized by Google

Digitized by Google